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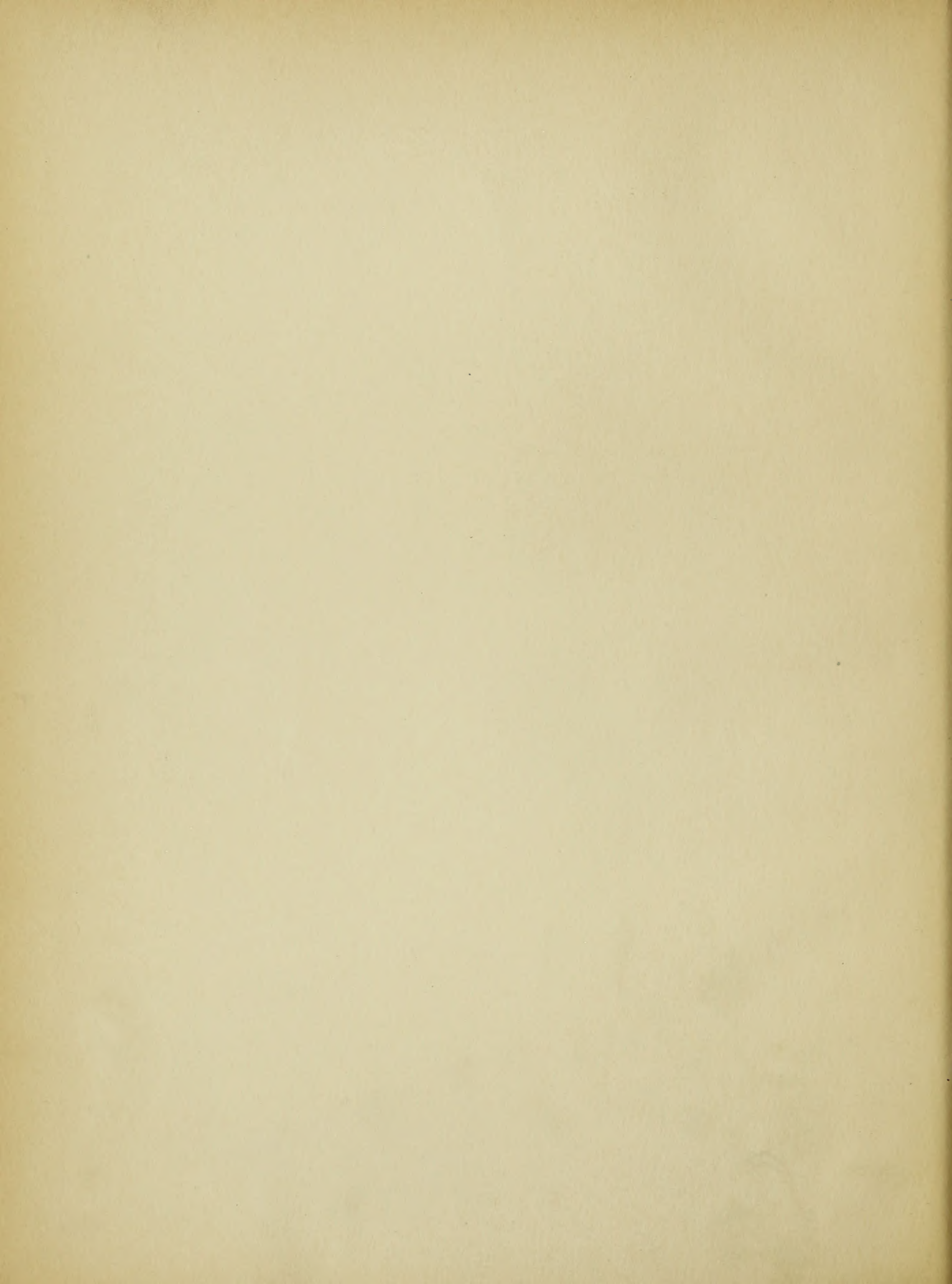
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The Holding Company in the Electric
Light and Power Field

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Light and Power Field



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Douglas H. Bellemore

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Submitted in Part Fulfillment
of
The Requirements
for
The Degree of Master of Business Administration



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1. The first part of the book is devoted to a general introduction to the subject of the history of science. It discusses the importance of science in human civilization and the role of the scientific method in the advancement of knowledge. It also touches upon the historical development of science from ancient times to the modern era.

2. The second part of the book is a detailed study of the history of the natural sciences. It covers the development of astronomy, physics, chemistry, and biology. It discusses the contributions of various scientists and the impact of their discoveries on society. It also examines the philosophical and methodological issues that have arisen in the history of these sciences.

3. The third part of the book is a study of the history of the social sciences. It covers the development of psychology, sociology, anthropology, and political science. It discusses the contributions of various scientists and the impact of their discoveries on society. It also examines the philosophical and methodological issues that have arisen in the history of these sciences.

4. The fourth part of the book is a study of the history of the humanities. It covers the development of literature, history, philosophy, and the arts. It discusses the contributions of various scholars and the impact of their work on society. It also examines the philosophical and methodological issues that have arisen in the history of these disciplines.

A. HISTORY *

Although we consistently think and speak of light and power in the same breath as if they had always been closely associated, this association has actually been of comparatively recent origin. I will therefore trace the development of each one separately until they converge.

1. Ancient Lighting.

Millions of years ago, perhaps the greatest fear that our ancestors had was their dread of darkness. During the night the beasts of prey stalked the forests in search of food. They came like a thief in the night. So strong was ~~this~~ antipathy to the night that we all feel it instinctively even in this age of civilization. In the old Persian faith the progress of civilization was exemplified by the God of Light, while the God of Darkness represented all that was evil.

Early man first used fire to cook with and for the light that it gave to the nearby surroundings. If he wanted light he built a fire. Finally some of his more astute brothers discovered that certain kinds of wood burned slowly, and that sticks of pine could be ignited at one end and would burn gradually. The so-called pine torch probably represents the first form in which fire was made easily movable for lighting purposes. The next development was the fire basket which could be filled with coals or embers and then

*"Development of Modern Europe" Vol. I by Charles Bearel
"The Ghost Servant" by De. Loss Kahl

"A Primer of the Electric Light and Power Industry" by A.F.Tegen

Although we constantly talk and speak of light and
power in the same breath as if they had always been
associated, this association has actually been of comparatively
recent origin. I will therefore trace the development of each
and negatively until they converge.

I. Another light.
Millions of years ago, perhaps the greatest hour
that our ancestors had was their hour of darkness. During
the night the forces of light stifled the forces of darkness
of light. They were like a child in the night. No strong
was this analogy to the night that we all feel it instinctively
even in this age of civilization. In the old Babylonian
the progress of civilization was exemplified by the God of
light, while the God of Darkness represented all that was evil.
Early man first used fire to cook with and for the
light that he gave to the needy surroundings. If he wanted
light he built a fire. Finally some of his more active
brothers discovered that certain kinds of wood burned slowly,
and that sticks of pine could be placed at one end and
burn gradually. The so-called pine torch was slowly replaced
the first time in which this was made really useful for
lighting purposes. The next development was the use
of a stick which could be filled with oil or wax and then

*"Development of Modern Science," Vol. I by Charles Darwin
"The Great Experiment," by E. J. Rieu
"A History of the Scientific Light and Power Industry," by J. E. Rieu

hung up to shed its meager light over a few square feet of surface.

Centuries passed and we came one night to a fire over which a pig is roasting. A man is lying before it and as he watches, he notes sudden flares of bright light as the fat ignites. The result of the observations of this early man, led to the invention of the first oil lamp which was probably a clay, clam shaped affair. We hear much of man's superior intellect, but we wonder of man's superiority when we learn that he passed for centuries without discovering any different means of lighting. Of course their design improved, but basically they were wick, oil lamps.

The Romans made their oil lamps from bronze and placed them on a multitude of standards, some of which greatly resemble our modern bridge lamps. With the fall of the Roman Empire, came the beginning of the period known as the Dark Ages. Civilization became retrogressive and the world became truly relatively dark in comparison with the previous centuries. The forms of lighting became crude and ineffectual. In the Church alone, do we find that the fine lamps of the Romans existed. It was here also that the candle was perfected, but it was mainly used to lend pomp to the elaborate ceremony.

, Mankind emerged from the middle ages, lighting his way with an oil lamp that was rather the worse for wear and not nearly as efficient as when it entered the Middle Ages. In 1609, Jean Baptiste, as a result of some chemical experiments, discovered^{that} if he distilled certain fuels, a peculiar gas was produced. He called it Gheist, meaning ghost. Practically he made no use of his experiments and

any up to about the middle of the century.

of course.

Consequently, the light was not at all

even when a light is admitted, it was in fact

and as a result, the light was not at all

as the light was not at all

early on, but in the history of the light

was probably a light, which was not at all

was a very important light, but it was not at all

that we have seen that the light was not at all

ing any different kind of light, it was not at all

design improved, but probably they were not at all

The design was not at all

placed them on a pedestal of stone, and it was

greatly improved, but probably they were not at all

of the design, and the light was not at all

as the light was not at all

the light was not at all

the light was not at all

and in fact, it was not at all

the light was not at all

the light was not at all

back to the light, it was not at all

the light was not at all

the light was not at all

and not nearly as effective as when it was not at all

Agos. In 1805, the light was not at all

experiment, it was not at all

provision for was not at all

effect. Practically no work was done at the experiment

it remained for Dr. John Clayton, a Yorkshire Minister, to carry them on, a half century later, to a utilitarian objective. He was able to produce gas from coal by a process that promised practical and important results.

At this point, it is interesting to note that the progress of lighting came very close to the progress of power. However, the connection was not a physical one, but rather the relationship of persons interested in perfecting these two important factors vitally affecting man's evolutionary development. William Murdock, who was at this time employed by James Watt, designed an apparatus that made it feasible to produce gas on a large scale for commercial purposes. The net result, was that in 1798, the Soko Works of the Boulton Watt and Company were equipped with facilities for illuminating them by gas. The Truce of Amiens which was signed in 1802, was celebrated by a "garish display of gaslight," in Birmingham, as the entire front of the Soko Plant was illuminated by specially arranged gas lights. It was not long before gas lights were installed in London.

The first practical use of gas in the United States of which we have any authentic record, occurred in Baltimore in 1816, when the city was formerly illuminated by gas. Although it became generally used for street lighting, it was not used to any great extent in the home until after the Civil War. It became practical to supply urban homes, but due to the great expense of laying the mains, the outlying districts and farms have never been supplied with gas. Even at the present time the majority of farms are illuminated by oil lights.

Soko Plant was illuminated at specially arranged gas lights.

2. The Electric Light.

The history of the electric light would seem to begin with the demonstration in 1809 of an electric arc, by Sir. Humphrey Davy. The current was supplied by a battery which had a capacity of two thousand volts. Of course it was seen that electric lighting which depended on a battery supply of electricity would never be commercially successful. Some means of generating a nearly constant flow of current was needed. Michael Faraday, was the scientist who solved this difficulty by investing the dynamo.

In 1868, certain light houses off the coast of England were equipped with electric arc lights which proved hugely successful. Iablockoff perfected the arc light and adopted it to street lighting. He patented his inventions in all the important countries of the world. The first important use of electric lights in buildings in America, occurred in Philadelphia, where the Wannamaker store was equipped for electric lighting. However, arc lights by their very nature, are not very suitable for indoor lighting and so, little progress in this sort of illumination was made until Thomas Edison invented the incandescent lamp on October 21, 1879. Our present lights are merely perfections of this basic type.

3. The Growth of Power.

Our early ancestors had only the use of such power as their own bodies supplied. Centuries passed, during which time they gradually tamed some of the wild animals with whom they came in contact; horses, camels, dogs and elephants, as the case may be. To this animal power the Egyptians added the power of the wind, which they used to draw water from the Nile for irrigation purposes. No new sources of power,

but only refinements of the above types, appeared until the latter part of the eighteenth century when James Watt succeeded in perfecting the steam engine.

It is true, that the principles of a steam engine had been demonstrated heretofore, but they had proved to be only costly laboratory experiments. It remained for the ingenuity of Watt to develop a practical mechanism. Up to this time, all sources of power had been erratic and did not prove capable of supplying a continuous flow of power. The steam engine provided a means of supplying a rather steady flow of power at a relatively cheap cost. This was, in essence, the cause of the Industrial Revolution. Watts' engine was first used commercially to run spinning machines in a factory in Nottinghamshire. Factories sprung up like mushrooms all over the South of England and the Industrial Revolution was in full swing. New industries were established and old ones were revolutionized. The steam engine itself, was perfected as time went on but even at the end of the nineteenth century it was an extremely inefficient engine.

In the previous section on lighting, we have shown how the cell battery was invented in 1794 and how the dynamo was discovered by Michael Farady in 1821. Farady found, that a wire through which a current was passed would rotate around the end of a magnet. Of course, our modern motors work on just the reverse of this principle, but in either case, a method of producing a steady flow of current was available. Eleven years later Faraday ascertained that when a wire is moved in a magnetized field, a current is generated. The first dynamos were run by reciprocating

the only alternative of not using steam, and the
last part of the nineteenth century saw the
introduction of electricity as a power source.

It is true, that the principle of a steam engine

has been demonstrated repeatedly, but they have failed to be
only costly laboratory experiments. It remained for the

discovery of Watt to develop a practical machine. He is
this time, all sources of power had been tried and all the
great trouble of applying a condenser to the cylinder. The
steam engine provided a means of applying a certain steady
flow of power at a relatively small cost. This was, in

essence, the basis of the Industrial Revolution. Watt's

engine was first used commercially in the spinning machine
in a factory in Nottingham. Factories began to like
machines all over the South of England and the Industrial
Revolution was in full swing. The factories were established

and old ones were re-equipment. The steam engine itself
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In the previous section on lighting, we have shown

how the cell battery was invented in 1780 and how the
dynamo was discovered by Michael Faraday in 1831. Faraday

found that a wire through which a current was passed would
produce around the end of a magnet. In 1831, he found

that if the magnet was moved or the wire rotated, an
electric current would be produced. This was the principle of
the electric motor. Several years later Faraday discovered that
electricity is used in a very different way. A current in
a wire produces a magnetic field around it. The first dynamo was built in 1832.

steam engines which were, compared to present day standards, woefully inefficient. Today, the turbine is used in both steam and hydro-electric plants. It turns huge cores of iron around which are many turns of wire, in a highly magnetized field. A current is thereby generated in the wire on the core. Electricity is taken from this iron core by brushes and thence through distribution systems made available, to the point where it is to be utilized for either power or light.

In 1879, as we have indicated above, Edison constructed the first successful incandescent lamp. At last we find that power and light have met, brought together by a new parent electricity, which they share in common with each other.

B

B. The Growth of the Electric Light and Power Industry *

1. Introduction

A half century ago, electricity was introduced commercially into this country, through the medium of Edison's Pearl Street Station in New York City. We live in a period of proffered and rapid changes. In his book "Business Adrift", W.B. Dunham says, "The time elements - involved in economic and social changes - affecting the bulk of humanity were far greater than the human life span; but the time elements in many such changes

* Sources of Statistics.

1. "The Electrical World" compilations.

2. "The Electric Light and Power Industry"-Basic Statistical Data. N.E.L.A. '31.

"Statistical Supplement to the Electric Light and Power Industry in the U.S." N.E.L.A. Revised to Jan. 1931.

N.E.L.A. Statistical Bulletin No. 7 - June 1931.

during the last two generations have been substantially less than the normal duration of life."

Our younger generation, especially, was born into this era, and finds it very easy to make quick and radical adjustments and for that reason it probably does not fully appreciate the great transformation that has taken place since the latter part of the nineteenth century. However, there are countless older people who can easily recall the time when electricity was unknown to the layman. There have been revolutionary changes in the old industries, and a phenomenal growth of new industries during the past thirty-five years.

In spite of the admittedly great rise of such industries as the automobile industry, I feel quite safe in asserting that the growth of the electric light and power industry surpasses them all. It does so, not only because of its growth in investment and in the value of its output, but because fundamentally it has been the chief factor making possible the aforementioned growth of our other great industries.

"No other industry can show a growth so rapid, and at the same time so big, and so consistent. From a comparatively minor factor in the business world twenty-five years ago, the electric light and power industry is now a giant among our country's business giants. The beginning of the industry dates only from 1882 and its greatest progress has been made during the last twenty years, while in the last ten years alone there has been a greater expansion than in all the previous years of the industry's existence". (1)

(1) Recent Economic Changes" President's Conference on Unemployment.

During the last few years, however, the Japanese have

been the main reason of this.

Our younger generation, however, are not so

very, and I think it is very hard to make any

change in the old system of thought, and I think

the great transformation that has taken place in the

part of the Japanese people, I think, is the

change in the old system of thought, and I think

the change in the old system of thought, and I think

changes in the old system of thought, and I think

industrial revolution, the great change in the

In the case of the Japanese, the great change in the

in the scientific revolution, I think, is the

that the growth of the scientific revolution, and I think

supplies the main reason. It is not only because of the

in the growth of the scientific revolution, and I think

the scientific revolution, it is not only because of the

the scientific revolution, it is not only because of the

"No other industry can show a growth so rapid, and

at the same time as this, and so continuous. From a

viewpoint since 1850 is the fact that the growth of the

ago, the scientific revolution, and I think

about our country's scientific revolution. The fact is that

industry & the only one that has been growing since the

been made during the last twenty years, and I think

can show along with the fact that the growth of the

all the various years of the scientific revolution. (1)

(1) "Recent Economic Changes" by the Japanese Government

Unpublished

As an estimate of the comparative rank of the Electric Light and Power Industry, I will quote from an article by Mr. Evans Clark that appeared in the New York Times of March 25, 1928. "No one has as yet invented a measuring rod that can be laid over first one of our industries and then another, to obtain definite comparative figures of size; but it is possible to make a fairly good guess at their relative importance in the scheme of American life. Such a guess must be made up of **many** elements. At least three stand out as crucial; the number of people who depend upon them for a living, the amount of financial investment involved, and the value of its output.

"Electric light and power might be ranked eleventh in the list, but this industry presents a difficult rating problem. Here again, is an industry that is largely automatic; the human element is small in proportion to the capital invested. The power plant stands in our modern civilization as the epitome of the age of the machine - a vast pile of steel and stone housing huge engines that work on night and day very much by themselves, tended only by one or two engineers. (In 1931 there is a large station in New York City that is entirely automatic. It is inspected once a year and then locked up until the next year.) The money value of the output is also out of all proportion to the importance of the industry **in** our economic life; only \$1,780,000,000. This is due, of course, to the amazing efficiency in its production."

As I have mentioned above the dependence of all the other great industries on this one (eighty-five percent of industry is electrified) should place it at the head of the

list. Mr. Clark puts it fifth according to the money invested in it, and thirteenth in point of value of products and in the number of employees.

2. The Trend Toward Larger Plants.

Originally the central stations, such as the Pearl Street Station, served only the communities within a radius of two miles, but gradually they began to extend their activities. This led to the need for larger generating units and for the more efficient transmission of power. In the early days turbines of 5,000 kilowatts or less were the rule. Of course the cost of generation was high per unit of output for a large fixed investment was necessary and the total costs were spread over only a few units of output. In 1915 units of 10,000 kilowatts capacity were introduced, but even these seem ~~at mere toys~~ **when compared to the modern** generators, some of which have a capacity of over 200,000 kilowatts. There are now some central station plants containing several generators whose total capacity exceeds 1,000,000 kilowatts. These larger generating units are much more efficient than were their predecessors. This is shown clearly by the following table which indicates the decrease in the number of pounds of coal needed to generate one kilowatt hour of electricity:-

1902	6.7	1922	2.5
1907	5.4	1927	1.84
1912	4.4	1929	1.66
1917	3.3	1931	1.60

There were 11 more boys when compared to the modern

These figures are the average figures for the industry as a whole. There are therefore many plants that are much more efficient. In fact, we find one plant on the Ohio River below Cincinnati, that is able to generate one kilowatt hour of electricity for every .86 pounds of coal consumed.

3. Increasing Distance that It is Efficient to Transmit Power.

The second factor we mentioned above was the need for more efficient methods of transmission. Although electricity was successfully transmitted a distance of twenty-nine miles in 1890, it was not until around 1910 that any real progress was made. One of the problems was to manufacture a type of low resistance wire over which electricity could be sent at high voltage. This difficulty was finally solved. At the present time we have a multitude of one hundred mile transmission lines, and in some instances electricity is efficiently transmitted a distance of two hundred miles. It is as yet impractical to send current over a longer distance than two hundred miles. In this connection, it is always well to keep in mind that in the case of electricity the distribution costs frequently make up a large percentage of the total costs. It is possible to send charges of as high as 220,000 volts over modern lines.

These factors have all tended to make possible, from the physical standpoint, the great systems of interconnections and large central stations supplying vast areas. Our country is practically covered with a network of interconnected electric lines. Some operating companies operate central stations that have transmission lines extending into several states. The interstate transmission of electricity

is beginning to be a problem for regulation. It has been increasing as follows:-

1928: 10.7% 1929: 11.8% 1930: 13.1%. of the total electricity produced in the United States

4. Increased Domestic Use of Electricity.

When the industry was in its infancy, the sales of electricity to domestic consumers constituted the bulk of the sales. After the turn of the century, the emphasis was placed on the electrification of industry. However, the growth of domestic sales has been continuous and steady as is shown by the following figures.

	1912	1922	1927	1930
No.ofCustomers)	3,100,918	10,211,232	17,950,000	20,331,550
Population Living in Elec trically Lighted Homes	14,000,000	44,000,000	75,000,000	84,500,000
Average K.W.H. per Year per Customer	250	359	443	548
			<u>%Increase 1930 over 1922</u>	
No.OfCustomers			99	
Population Living in Electrically Lighted Homes			92	
			<u>1931</u>	
Average K.W.H. per Year per Customer			572	

During the last three years the electric companies have been trying to increase their domestic sales. The reasons should be self evident. Industry provided

is designated as a special tax...
 (continued on following page)

1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920

When the industry was in the infancy, the value of electricity was...
 the value of electricity was...
 the value of electricity was...
 the value of electricity was...
 the value of electricity was...

1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000

1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000

During the last year...
 have been...
 reasons...

about seventy-five per cent of their gross revenue in 1928. The effect of the depression caused a great falling off in their commercial sales. The electric companies have been very successful in increasing their domestic sales, for not only have they increased the number of domestic consumers, but more important, they have increased the average number of kilowatt hours sold to each customer. The increase has been remarkable in the latter case, with 1931 30 per cent. over 1927. When we find that the increase was only 40 per cent. from 1912 to 1922 those figures should be very illuminating. The companies have stressed intensive expansion; i.e., the sales of appliances in the homes already supplied with electricity. The sale of electric refrigerators is a case in point.

<u>1921</u>	<u>1927</u>	<u>1930</u>
6,000	365,000	775,000

The results for the industry as a whole were **very** gratifying, for while total sales of energy to all customers decreased .5%, total revenues increased 2.7%. The falling off in the use of energy was confined to large industrial power which embraced the lowest rate classifications.

We hear a good deal about the future expansion of the domestic market. We are told that 30% of the homes in the United States are as yet unsupplied with electricity. However, I feel that we are reaching the margin, and that if expansion is extensive, the point of decreasing returns will set in. That is, where are these homes that remain to be electrified? Well, ten percent. of the farms are electrified and without doubt they are those which could be

about a year ago, but now it is almost entirely
 The effect of the high water level is to
 about a year ago, but now it is almost entirely
 very successful in increasing the amount of
 not only that they have been the cause of
 concrete, but also the fact that they have
 average number of houses built in the
 The number of houses built in the
 1921 to 1922, and the fact that the
 and only 40 per cent. of the houses
 be very successful. The number of houses
 estimated, i.e., the effect of the
 estimated with accuracy. The fact is
 fact is a fact in itself.

1921	1922	1923
100,000	100,000	100,000

The results for the year 1923 are
 showing the effect of the
 amount of, and the fact that
 all in the fact that the
 power which is the cause of
 We have a good deal of
 the electric power. It is the fact that
 the United States are not
 However, I feel that the
 is a question of
 will not be. It is the fact that
 to be successful, it is the fact that
 all-out and without any

supplied at the cheapest costs. The lot of the farmer has not been a pleasant one during the last ten years and the future does not look very bright for him. It is doubtful whether he will be a great potential customer in the near future. A great many of the other homes not supplied are in our southern states where the family buying power is scarcely great enough to keep its members supplied with even the bare necessities of life. I therefore feel that if any expansion is to take place in domestic sales, it will be due to the use of more appliances in homes already supplied with electricity.

5. The Electrification of Industry.

I have indicated that the initial growth of the industry was the result of domestic demand, but that after the turn of the century the industrial demand assumed the preeminent importance and it is the latter that has been the magic cause of the phenomenal growth of the electric industry. The remarkable industrial progress would have been impossible without the use of electrical motors.

"The United States has led the world in the development of its industrial resources. All history records no achievement of parallel magnitude in expansion of productivity in better utilization of materials and wiser expenditure of effort, in improved organization and administration."*

"We have made remarkable increases in national efficiency as expressed by larger individual productivity. Our American workers produce more goods per man than ever before.

"Statistical Supplement to the Electric Light and Power Industry" - Jan. 1931, by N.E.L.A. Page 13

They do it with greater skill, with less actual sweat and with shorter hours.

"This large productiveness has enabled us to maintain a high wage level, while at the same time we have held down and in many cases reduced, prices and costs of living, thus giving our workmen a real wage nearly twice that of any European worker and in 1929, the highest ever reached in our country.

"During the period from 1914 to 1927, the industrial output of this country on a quantity basis and with price variations eliminated, has increased by seventy-five percent. virtually the entire increase being electric.

"The number of persons engaged in industry however, increased from 1914 to 1929 by only 27%; this indicating a greatly enlarged production per worker. There clearly appears to be a relation between more use of power, increased productivity, higher wages and a better standard of living." *

The following information obtained from the records of the United States Census of Manufactures gives some idea of the growth of the total installed primary power in factories in the United States:

* Statistical Supplemental to the "Electric Light and Power Industry in the U.S." Jan. 1931 - P.13.

last of 1933, the first year of the depression.

with various bodies.

"This large organization has worked in co-operation

a high wage level, while at the same time we have held down

and in many cases reduced, prices and costs of living, thus

giving our workers a real wage which is higher than in 1933.

Through their efforts in 1933, the highest wage level in our

country.

"During the period from 1933 to 1937, the industrial

output of this country has a steadily rising rate of growth

various industries, but particularly in heavy-duty industries.

virtually the entire increase being absorbed.

"The number of persons engaged in industry, however,

increased from 1933 to 1937 by only 2.5% and industrial

output increased by 40%. This clearly suggests

to be a relation between cost and output, labor.

productivity, higher wages and a better standard of living."

The following information obtained from the records

of the United States Bureau of Manufactures shows that

of the growth of the total industrial output power in

factories in the United States:

* Statistical Supplement to the "Economic Report and Review

Industry in the U.S." 1937-1938 - p. 15.

Growth of Factory Machinery in the United States^a

(From the U. S. Census of Manufactures)

Prime Movers—Horsepower

Dec. 31 of Year	Steam Engines and Turbines	Internal Combustion Engines	Waterwheels and Turbines	Total Own Power	Electric Motors Op'g on Purchased Power	Total Prime Movers in Industry (b)	Elec. Motors on Purchased Power is % of Total
1889	4,586,089	8,930	1,255,045	5,850,064	5,938,635
1899	8,189,564	134,742	1,454,112	9,778,418	182,562	10,097,893	1.8
1904	10,917,502	289,423	1,647,880	12,854,805	441,589	13,487,707	3.3
1909	14,228,632	751,186	1,822,888	16,802,706	1,749,031	18,675,376	9.4
1914	15,591,171	988,591	1,826,413	18,409,941	3,884,724	22,290,899	17.4
1919	17,036,210	1,241,829	1,765,131	20,043,170	9,284,499	29,327,669	31.7
1923	16,700,993	1,224,262	1,803,310	19,728,565	13,365,663	33,094,228	40.4
1925	16,915,740	1,185,738	1,800,828	19,902,306	15,864,638	35,776,944	44.4
1927	16,941,098	1,170,759	1,783,711	19,895,568	19,144,995	39,040,563	49.0

^a See footnotes to Table IX.

^b Includes in earlier years, a small amount of "other rented power," chiefly through belts or shafting from other establishments.

In the foregoing table on "Growth of Factory Machinery in the United States," we notice the rapid increase in the percentage of electric motors operating on purchased power. In this regard I will quote from an address by Dr. Glenn Frank, given at the Midwest Power Conference at Chicago, February 14, 1928. "In a machine civilization created by steam power, the worker must go to the power, but in a machine civilization created by electric power, the power can be taken to the worker; and that is a revolutionary fact which means that when we say "machine civilization" in terms of 1950 we may be dealing with a machine civilization as that is/different as imagination can conceive from the machine civilization which began when James Watt first harnessed

the expansion power of steam to the processes of production."

According to the survey on the migration of Industry made in 1928 by the Metropolitan Life Insurance Company, it was found "that markets are advanced most frequently as the reason for the location of plants. Transportation ranked third and the cost of power seventh in importance when the location of a plant was being considered.

"It has been estimated by the National Bureau of Economic Research, that the total prime mover capacity in the United States to be about four times that of either Great Britain or Germany and ten times as great as that of France; and that the per capita wealth of the United States bears the same relation to the per capita wealth in Great Britain that the total horse power here does to the total horse power there.

"The consumption of electrical energy has been increased at a rate about three and three quarters times the increase in population. Production of electric current was about 676 K.W.H. per inhabitant in 1927 as compared with 630 K.W.H. in 1926."*

"The changes in primary power, per wage earner in the United States, has attracted as much general attention as those which have taken place in regard to productivity. Nearly as great an overall increase occurred from 1919 to 1925 as from 1899 to 1919. The latter figure is 47% and

*"Recent Economic Changes"-Presidents' Conference on Unemployment P. 79.

the former 30.9%. The increase in the primary power available to each worker in manufacturing establishments is one of the most important and significant changes which has taken place since 1919. This is not the only significant change in industrial utilization. There have been increases in the installation of electric motors to supply mechanical power in manufacturing, in the amount of power purchased instead of generated by manufacturing establishments, and in the efficiency of prime movers. The first two of these trends account in part for the rapid development of electric public utility companies." *(see above table). When we realize that from 1919 to 1927, there was only an insignificant increase in the number of boilers and engines installed in manufacturing plants, we discover that practically all of the total increase in primary horsepower has been in electric motors operated on purchased power. However, although about eighty per cent. of industry is electrified, only fifty percent. of the power so used is purchased power, the remaining fifty per cent. being generated locally.

*"Recent Economic Changes" by the
President's Conference on Unemployment P. 119.

The former 30.0% The increase in the primary power
available to each sector in the industrial sector
is one of the most important and significant of the work
has taken place since 1970. This is not the only significant
change in industrial electricity. There have been changes
in the installation of electric motors and energy consumption
power in each sector. In the amount of power consumed
industry? It generated by each sector and distribution, this is
the efficiency of each sector. The increase in the
primary resources is part of the total development of electric
power in the country. (See above table). With the
realization that from 1970 to 1977, there was only an insignificant
increase in the number of boilers and engines installed in
manufacturing plants, we find the total electricity in 1977
the total increase in primary resources was only 10 percent.
power operated on permanent power. However, although there
eighty per cent of industry is electrified, only 10%
percent of the power is used in permanent power. The
remaining fifty per cent being generated in 1977.

"Recent Economic Developments" in the
President's Conference on Development, 1977.

6. Water Power *

Important factors in the growth of the electrical utilities change rapidly and frequently archaic ideas remain on the minds of the public concerning important facts about the industry.

The public was educated in a school that considered, and rightly so at the time, that wherever possible electricity should be produced by water power rather than steam. I want to point out that in the future I believe that the production of electricity by hydro electric plants will decline, relatively.

The changes that have occurred have been basic ones and due to many factors they have not been evident until recently. **The percentage of the total electricity** generated in the United States which was produced by hydro electric plants grew steadily until 1928 when it accounted for about forty per cent. of the total. The best sites have all been purchased.

Perhaps the most important factor has been the increasing efficiency of the steam engine. We have previously noted the drop in the number of pounds of coal needed to generate one K.W.H. of electricity. Due to this factor alone modern steam plants can generate electricity as cheaply as all but the most favorably situated hydro-electric plants.

*"Statistical Supplement to the Electric Light and Power Industry of the U.S." N.E.L.A. Jan. 1, 1931. Page 7.

Important factors in the growth of the electric
industry during the last decade have been
on the whole of the electric industry, however, these
the industry.

The electric was introduced in a new form, and
and rapidly as of the time, that however, the electric
should be produced by water power, which was much
want to point out that in the United States the
production of electricity by water power plants was
declined, and much.

The changes that have occurred have been both
and the to many factors that have been evident until
recently. **The percentage of the total electricity**
in the United States which was produced by water power
plants has steadily increased since 1900, and is now
about 60 per cent. of the total. The best of these have
been produced.

However, the water power industry has been the
increasing activity of the electric industry, and the
noted the fact in the report of 1900, that the
percentage of the total electricity produced by water
power plants was 40 per cent. of the total, and
all but the water power industry, which has been the
main factor in the growth of the electric industry.

The electric industry has been the main factor in the
growth of the electric industry, and the water power
industry has been the main factor in the growth of the
electric industry.

Another important factor is the stability of the source of power, when coming from steam plants as contrasted with that generated by hydro-plants. The extraordinary drought that prevailed in 1930, seriously curtailed the output of hydro-electric plants and made engineers ponder on the value of hydro plants in general. There is also a seasonal variation in the flow of water providing the power for these plants. This is sometimes very great as is shown by the fact that in May, 1928, the hydro electric plants produced forty six per cent. of the total electricity generated in the United States, but in September of the same year, only twenty-eight per cent of the total.

As it takes several years to build a large hydro electric plant, we find that "construction in the majority of the hydro plants that have recently put into operation was begun or contemplated when the cost of coal was much higher and the efficiency of the steam plants was considerably lower than it is today. Sites were purchased for these projects, contracts were let and material purchased. The cost was such that the operators could not help but complete projects. The reports of the Federal Power Commission indicate that water power development has been slowing up.*

*"Statistical Supplement."

N.E.L.A. Jan. 1, 1931. Page 9.

7. Trend Toward Mergers

Although the cause and effect of mergers in the electric light and power field will be more fully covered in another section, it is perhaps pertinent to note a few statistics here, indicative of the trend.

"The record of mergers and acquisition by industries . . . is clearly upward. The number of mergers is increasing steadily. . . .The most conspicuous trend toward consolidation in recent years has been in the field of public utilities." 1.

*There was a trend toward mergers prior to 1921 but it was insignificant when compared to the trend since that time. For example there were twenty-two mergers and acquisitions in 1919 and fifteen in 1920. However there were seventy-five in 1921, and the number rose steadily until 1926 when there was the astounding total of 1,029 mergers and acquisitions. In 1927 of the total mergers, fifty-four were those of holding companies acquired by larger holding companies.

The mergers prior to 1920, were the result of long deliberation, and were in most cases undertaken because of the efficiencies that were obtainable by so doing. However, the wild scramble and competition among the large holding companies from 1920-'29 for the smaller independent companies caused reason to be thrown to the wind. Prices were paid for companies that were way out of line with true values.

1. "Recent Economic Changes" President's Committee on Unemployment P. 185

* "Recent Economic Changes" President's Committee on Unemployment P. 187-8 .Adapted from these pages.

The public was demanding utility securities and the bankers were only too willing to foster any schemes that would provide for the flotation of issues.

8 Summary

The growth of the electric light and power industry has been phenomenal. It has gone hand in hand with the advancement of industry. As a sort of paradox, it has made possible the modern methods of industrial production, which has caused a large industrial growth and in turn this latter has made possible the expansion of the electric industry. It is the old question. "Which came first the chicken or the egg?" From 1919 the growth in the total primary horsepower in industry has risen by leaps and bounds and the growth has been entirely in the increase in electric motor horsepower. Although eighty per cent. of industry is electrified, fifty per cent. of the power is generated locally at the manufacturing plant, and fifty is purchased from central stations.

There has been a remarkable increase in the efficiency of steam engines, one hundred percent, increase since 1919. It would seem that the future expansion of the industry will be in the form of steam, rather than in hydro plants, due to the more efficient steam generators, the unreliability of the hydro electric plants, and the fact that all the best sites for hydro plants have been developed.

The domestic consumer has been the object of attention during the last few years due to the drop in industrial demand. The utilities have succeeded in increasing the domestic use of electricity and the efficient operating companies have been able to maintain their revenues at the high points reached in 1929.

The early mergers in the utility field led to interconnection in many cases. Much emphasis was laid in the development of efficient methods for transmitting power for long distances. In many cases this was due to the desire of operators of hydro electric plants to utilize all their available sources of power. However, the mergers during the last few years have been, in most cases, merely financial gestures or operations. At the same time "a formidable competition has arisen in the form of local generation by means of steam. This has been the result of many contributing causes; to the improvements in steam turbines, to the still greater improvements in boilers and furnaces, and last and probably most important of all, to the development of mass production by very large units which the present extent of the load and the scope of electric service make possible!"*

* "Statistical Supplement" Jan. 1, 1931. N.E.L.A. Page 24

Mr. E. C. Stone, Chairman of the Engineering National Section of the American Institute of Electrical Engineers, said at the mid-winter convention of this body in 1928, "At this time, because of the recent rapid extension of transmission lines and the multiplication of interconnecting links, which make the transmission map look something like a railroad map, the public is prone to conclude that there is no limit short of the continental confines of the United States to the transfer of energy; and therefore engineers particularly in their speeches and writings must give proper emphasis to the limitations as well as advantages of interconnection, so as to be sure that the public does not get a distorted view of the situation."

"Although notable exceptions exist, and widespread interconnection over long lines has been developed with outstanding success in many sections of the country, nevertheless when considered as Nation-Wide totals, the long-distance transfers of bulk supplies of power, comprise only a small fraction of the total generation. . . . The bulk of the electrical energy generated is still consumed in the vicinity of the power plants. The average distance traversed by the average kilowatt power in its path from power house to consumer in the United States is only about twenty miles. . . .

"To a large extent this is the result of economic factors which have dictated the location of steam plants in the near neighborhood of the large markets for their power in

our seaboard cities and the great industrial regions of the country. It is also the result of increasing economies being affected in the generation of electricity by steam near the centers of use as compared with the cost of making water power developments at a distance and of bringing this power to market over long transmission lines." 1.

"Such relay plants necessary and the cost of long transmission lines, commonly take away much of the advantages of hydroelectric power over steam, leaving only a fraction of a cent per kilowatt hour to represent the reduction which can be made in the rates charged to the users of service. This is a very small proportion of rendering retail service the major part of which is made up of carrying charges, taxes, expenses connected with distribution, servicing, metering, accounting and administration, and other items." 2.

The trend toward decentralization of industry has been attributed by many to the growth of interconnections, However, we find that in the first place only fifty percent. of industrial power is purchased from utilities and, of course a large percentage of the purchased power only travels a short distance from the generating company to the plant. The decentralization has been due first to the reason given for location as nearness to markets, secondly, the ability of large power users to generate electricity

1. "Statistical Supplement" Jan. 1931. N.E.L.A. P. 38

2. "Economies of Public Utilities" by Nash P. 405.

almost as cheap or cheaper than they can buy it and thirdly, to interconnections. Industry itself placed the cost of power as a poor seventh in their reasons for the location of threeplants.

The trend toward larger plants, the increasing distance that electricity can be economically transported, and the trend toward mergers have all tended to hasten the trend of consolidations. We find that gradually the holding company has become dominant, first in the field of urban electric companies and secondly in the field of smaller inter-urban systems.

PART II

The Holding Company in the Electric Light and Power Field.

1. The Corporation as a Factor.

Public utility companies operate under a charter granted them by the state. The early public utilities that operated in this country until 1860, were usually organized under the provisions of a special charter. This was because the modern era of corporations had not yet arrived, and as the demand for **charters** was small, the states found it practical to grant a special charter for each corporation as it was formed. However, after the Dartmouth College Case, which held that state commissions or legislatures could not change special charters without the consent of all the parties, the states passed "a general law providing that any group of persons executing the proper papers and filing them in the proper offices, and at the same time paying the proper fees, thereupon shall create the corporation. The statutes have been made very complete in respect to the details of organization and management,"(1) and the powers of the corporation. The charter gives to the business perpetual succession which is even more necessary for a utility than it is for other types of corporations. The right of eminent domain or the right in this case, to use property for public service but **private profit**.

1. "Financial Organisation and Management" by Charles Gerstenberg. P. 76.

2. "A Corporation is an artificial being, invisible, intangible and existing only in contemplation of law. Being the mere creature of law, it possesses only those properties which the charter of its creation confers upon it, either expressly or as incidental to its very existence. These are such as are supposed best calculated to effect the object for which it was created; among the most important are immortality and if the expression may be allowed, individuality, **properties** by which a perpetual succession of many persons are considered as the same, and may act as a single individual. Capacity to sue and be sued, to make contracts, to take hold and convey property, and to commit torts and crimes."*

*Dartmouth College Case by Chief Justice Marshall. from

"Financial Organization and Management" by Charles Gerstenberg.
Page 73.

The early charters frequently attempted to specify a schedule of maximum rates, and also the rate of return which the **public** utility could earn. Today these factors are usually determined by the state public utilities commission.

I will summarize the advantages of the **corporate** form of organization over other types, for concerns in the public utility field.

- a. A large amount of capital may be obtained by the various methods of corporate financing. The owners, of course, enjoy only a limited liability.
- b. A corporation has indefinite life. This is essential, both from the investor's standpoint, for they have invested a large amount of fixed capital in plant and equipment, and from the public standpoint because the continuity of the life of the public utility is necessary for the well being of the community.
- c. Because of its relatively large financial backing, a corporation is able to engage the services of competent directors and managers.
- d. Shareholders can transfer their ownership by selling their shares to those desirous of becoming members of the corporation. In some cases, the statutes of a corporation require that the shares be offered to the corporation before they are sold to the public. This is an attempt to protect the corporation from being made the tool of unscrupulous speculators.
- e. It permits flexibility in financing.

f. An enterprise of such magnitude as a modern public utility business, can be more easily managed under the corporate form than under other forms of organization in which the owners participate directly in the management.

There are three general types of corporations; Public, Private and Quasi-Public. The latter group includes those corporations affected with a public interest, and so we find the public utilities make up the bulk of this group.

I have tried to show that the corporation is a necessity in the public utility field. The electric light and power industry would never have emerged from its infancy unless it had enjoyed the opportunities of growth and flexibility, so characteristic of corporations. I have indicated that while the states at first tried to control the public utilities simply by the special charter device, they now do so by means of a combination of the charter franchise and commission types of control with an emphasis on the latter. Although most students of economics agree that the corporation is the most practical form of organization for certain fields including the public utility industry, many of them agree with Professor William Z. Ripley of Harvard, in feeling that our corporation laws should be drastically overhauled. Many of the states are too liberal in their methods of granting charters and in their laws governing the conduct of corporations. Mr. Justice Brandeis commented on this need for revision of our corporation laws

in "Other People's Money" and William Z. Ripley used it as a basis for his book , "Main Street and Wall Street".* When we discuss the present holding companies which are of course corporations, the need for these changes will be even more evidenced.

* "The present task of the law is nothing less than to rehabilitate the individual . . . not to make the subordinate independent of the superior, not to turn corporations into debating societies, not to disintergrate what we have been at such pains to piece together in the organization of modern enterprise, but to undo enough of what we have done in the development of our law of corporations to give the law direct access again to the individual . . . to every individual in all his functions" P. 4 . . . "It is perfectly possible to have corporations and serve all the necessities and conveniences of modern society by means of the great combinations of wealth and energy which we have found so excellent, and yet dispense with a large part of the quite outworn and now in many respects deeply demoralizing fiction that a corporation is an indivisible person." P. 9 . . . "A man has no more right to do wrong as a member of a corporation than as an individual." P. 15 . . . "A corporation is an indispensable convenience but is it a necessary burden?" P. 8 *

*"Main street and Wall Street" by W.Z.Ripley

2. The Types of Holding Companies.

There are three general types of corporations in the public utility field and all the companies fall under one of these three groups.

a. Operating Companies.

Operating companies are those companies which are engaged solely in supplying service directly to the public. They either generate electricity or purchase it and sell this current to their customers. They are single business units in themselves

b. A Holding - Operating Company.

There are certain companies that not only are engaged directly in the business of selling light and power, but also control other operating companies, usually those supplying electricity to neighboring communities.

c. Holding Corporations.

We are going to use the word holding company in its broadest sense which means that the control must not necessarily be exercised through the control of over fifty per cent. of the subsidiaries stock. Due to many factors including the unwillingness of stockholders to vote and the issuance of non-voting stock, control is often maintained by a group owning only a small percentage of the stock of the subsidiary. We have two general types of holding companies.

I Investment Holding Companies

These companies are supposedly only interested in the subsidiaries from an investment standpoint. They own the stocks of the subsidiaries and as all of their income

is the result of dividends declared by the subsidiaries, they are interested in the latter to the extent that they wish them to remain financially sound and able to pay dividends. This type may also make a profit by acting as the agent for its subsidiaries in floating new security issues of the latter.

II Management Holding Companies.

This type is actually connected with the operations of its subsidiaries by means of management, construction and other contracts. It of course plans to make a profit from such corporations. Of course it also owns stock in these subsidiaries but usually it is below the "technical" fifty per cent. control amount. It therefore derives an income from dividends. It may be of interest to note here the position of Electric Bond and Share Company. It (the board of directors) states that it is not a holding company but a management company. We look at the balance sheet and find that about ninety-eight percent. of its assets consist of the stocks of public utility companies. People invested in Electric Bond and Share and dividends were earned in a large part from profits from management contracts, and yet the money they invested was used to purchase stocks of utility companies. This latter fact being true one would expect, that if the purchases had been wisely and fairly made, that the returns would be adequate to support the capitalization of Electric Bond and Share Company. All profits from contracts would be in the form of extra profits. However, much to the dismay of the stockholder of Electric

Bond and Share, he is told that due to the reduction in profits on contracts in 1931, the earnings of his company have shrunk so greatly that no dividends can be declared on the common stock and that the capitalization should be reduced to a third of the existing figure. There must be some flaw. He invested one hundred dollars in Electric Bond and Share Common. This money (minus some deductions) was used to purchase securities that now represent ninety-eight percent. of the assets of his company. The dividends from these securities can only support a capitalization equivalent to about one third of the money invested in them! Is Electric Bond and Share an Investment or Management Holding Company? Who is there who can draw the line of distinction? Any one who attempts to draw sharp distinctions between the present types of holding companies shows more courage than wisdom.

3. The Economic Forces which caused the Rise of the Holding Company.

In "Main Street and Wall Street", William Z. Ripley said in regard to corporations, "a corporation is a convenience but is it a necessary burden?"* This applies with double force to the holding company. During the last decade a multitude of serious abuses have crept in but I wish to approach the matter from the beginning. I wish to give the industry the benefit of all doubts. I will, therefore, try to point out how the holding company has contributed to the growth of the industry and then I will consider its abuses.

The form of consolidated effort which, has been one of the greatest forces in the social progress of mankind

down the centuries, expresses itself in business through the media of first, the corporation and secondly, the holding company. However, with the advent of this tendency in business came the age old fear against monopoly which found expression in the United States in the Sherman Anti-Trust Laws. Our politicians whose lack of knowledge of even the most elementary economic principles is constantly evidenced, raise their voices in chorus against a power monopoly. They fail to realize that a public utility company is by its very nature a quasi-public corporation, and inescapably monopolistic. Competition is disastrous, both to the companies and to the public. This principle being ascertained and one recognized by all economists, we have overcome at the start, the greatest and most discussed disadvantage of consolidations. It is interesting to note, that at the present time we find that there is an increasing feeling among the leaders in the United States, that the Sherman Law is archaic and that the advantages even in industry, of unrestricted competition, have been greatly overemphasized. The general public opinion has of late been favorable to consolidations as is evidenced by the multitude of vertical, horizontal and circular mergers that have occurred during the last decade.

I will now list the economic advantages of the holding company as given by the Vice President of H. M. Byllesby and Company in an Address before the "Fifty Third Convention of the National Electric Light Association." His emphasis is in the management type which is, of course, the most economically justified of the two general types.

a) "Concentration of management:-

Consolidations of several operating properties **bring** about an increased volume of business under one management.

b) Concentration of Production:-

Such consolidations enable the organization to concentrate production in large units, increase the utilization of plant transmission and distribution capacity, and employ the services of the best administrative, financial, operating, construction, technical, purchasing, sales, publicity, advertising and other specialists.

c) The work of these specialists bring two results:

- I. Continually improved operating efficiency.
- II. Increased volume of business.

These react upon one another to bring about improvement in service and decrease in its cost per unit. It is directly manifested in the development and standardization of the best methods of construction, operation, purchasing, rate making valuation, accounting, sales, advertising and other work.

d) Consolidations Lead to Interconnections:

Each consolidation increases the possibility for interconnection with other systems or groups, thus preventing duplication of facilities and realizing in full, advantages of quantity production, which gives in general a better product at lower cost. This in turn results in a more favorable station load factor, the use of large generators of high efficiency, reduction of peak load reserve capacity, and stability of service.

e) The Financial Standing of the Companies is Increased.

Due to consolidation of properties, increase in earnings, economies in operation and diversification of risks, the financial standing of the group is so increased that capital for refunding, extensions and improvements can be obtained at lower cost for the group than would be possible for any individual property standing alone.

This is probably the outstanding advantage of any holding company for its (i.e. the electric light and power operating company) high capital rates of five to one and its tremendous capital needs for expansion make financing of paramount importance.

In "Electrical Utilities" William Mosher agrees with the last statement of the Vice President of H. M. Byllesby and Company. He says, "Facilitating the financing of subsidiaries is perhaps the outstanding advantage of the holding form of organization in every field in which it is used."

4. Advantages to the Consumer.

a. The development of long distance transmission of electricity which has promoted the grouping and interconnection of adjoining power companies.

Of course, this is sometimes possible by means of contracts even though the companies have nothing else in common.

b. The elimination of waste and duplication of equipment.

c. The increasing use of off peak power which permits the utility to reduce its rates.

d. The savings in labor costs.

e. The savings in fuel, due to the increasing efficiency of large steam turbines.

- f. The conservation of capital.
- g. The modernization of service.
- h. The furnishing of electricity to sparsely settled districts.
- i. As a result of the above; lower rates which has caused a wider use of electricity and thus has raised the general level of our standard of living in this country.

5. Advantages to the Investor

- a. Better assurance of protection to his securities.
- b. Combination of high managerial and financial skill in management.
- c. Geographical and industrial diversification of the territories served by the subsidiary operating companies making up the group.
- d. "Capitalization stock interests:--It affords the stockholders the opportunity of controlling a larger amount of property and business than would otherwise be possible with the amount of capital at their disposal." *

B. Financing the Industry

Introduction.

In a previous section I have shown that the corporation is the principal form of organization in the field, and that the so-called holding company is at the present time the dominating type of corporation in the field. It is my purpose in this section, to point out the most common types of corporate financing and to show how important each of these is in the public utility field. Then I will discuss some of the more recent forms of holding company capital structures.

There are two major divisions which we must consider in handling corporate financing. The first class is known as debt financing, and the second, as equity or stock financing. At the present time the fundamental differences between these distinct types should be clearly defined, for of late years the public has been taught to **consider these differences insignificant** from the investment angle. This has, no doubt, been due to the activity of most of our investment houses during the last decade, which were pushing the sales of stocks and they therefore quickly passed over the safety principles underlying bond investments. They convinced the public that stocks they were selling were as stable and much more desirable than bonds, for by investing in the latter they could make much larger returns. Perhaps many of the younger salesmen were sincere in this "sales talk", but no doubt they have been duly chastened by the events of the last two years.

It is a common error to suppose that the

constitution is the only law of the land

and that it is the only source of authority

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Even the public is beginning to look at fundamentals. They should realize that bonds are promises to pay definite sums of money at a definite time, and to pay a definite rate of interest at stated periods for the use of this money. They are in reality evidences of a debt of the corporation.

Stocks are a vastly different sort of security. A stock certificate is the evidence of the shareholders right to a certain stated portion of the equity of the corporation remaining above its debt. We have of late years seen all sorts of stock with newfangled names, but a stockholder is not a creditor of the corporation; he is a part owner and his rights are governed accordingly. He has invested his money in the corporation for an indefinite time, while in a strict sense the bondholder has loaned his money to the corporation for a given period of time. The corporation is obliged to pay the interest when due, but it does not have to pay dividends unless the board of directors dictates them. In the latter cases they become a liability of the corporation.

2. Ways of Securing Capital.

I will now indicate the main divisions of these two basic types of investments. How does a corporation secure its capital funds?

a. By borrowing.

When a corporation secures its funds by borrowing, it creates a liability that must be shown on its books as such and on its balance sheet. It involves the principle of "trading on the equity, which process tends to magnify both profits and losses. That is the owners may be able

to borrow funds at 6% and they feel they can make this borrowed money earn 10%. They have no more money themselves and if they take in new owners by selling stock, the latter will share in the earnings on a pro rata basis. The owners, therefore, decide to issue bonds and they will share a profit of five percent. on this borrowed money as well as ten percent. on their own invested capital.

The tremendous initial investment required for establishing either hydro-electric or steam generating plants, especially the high cost of the former, necessitated securing a large amount of capital at the outset. In addition, the industry has been constantly expanding requiring vast sums of money for this purpose. Usually mortgage bonds form the nucleus of the initial investment for as the project is new investors demand that their investments be secured by the plant that is constructed. In the early days of the industry the companies found it almost impossible to secure funds in any other way than by bond sales, with the result that their companies became saddled with a heavy and burdensome debt. The holding company came along and managed to secure funds by selling stock thus creating an equity behind the bonds and thereby balancing the capital structure of the companies.

Creditors may be divided into two principal classes

(a) Secured and (b) unsecured.

I) Secured Loans

"Secured loans are always accompanied by the pledge of specific assets, generally by means of a mortgage. A mortgage may be defined as a deed absolute in form but subject to defeasance, given to secure the performance of some act on the part of the mortgagor, usually his repayment of a loan made by the mortgagee at the time of the execution and delivery of the mortgage.--- When the term mortgage is used the average person thinks of an ordinary real estate mortgage. Business corporations however often mortgage their general properties in order to secure loans. These mortgages may cover specific property such as land and buildings, but sometimes they are of the general variety and cover everything, present or future that the company owns or may own." *

A. Real Estate Mortgage Bond

A real estate mortgage bond is one that is secured by a mortgage on specific property belonging to the corporation such as land and buildings.

B. General Mortgage Bond.

This type of bond is secured by all the property owned by the debtor and in some cases, notably old style mortgages, by all property later acquired.

C. Types of General Mortgage.

1. Closed End Mortgage.

In this mortgage the number and amount of the bonds to be issued at that time, is definitely stated and no more can be issued under that mortgage. If more bonds are issued they are issued under a new mortgage having a lien subsequent to the

* "Investment Principles and Practices" by Badger P. 143.

former mortgage. This is, of course, a great protection to the bondholders but it makes it more difficult for the corporation to carry on future financing.

2. Open End.

This is actually the opposite of the closed end, for there is no specified limit as to the amount of and the number of bonds that may be issued under it. This is not generally considered to be a sound method, at least from the investors standpoint, for new issues of bonds may weaken those already issued under the same mortgage, if they are not balanced by an increase in assets equal to the amount of the new issue.

Of course, in states where the public utility commission has jurisdiction over financing, the investors under such a mortgage are protected to the extent that this body checks all new security issues and sees to it that the security of former issues is not impaired.

3. Limited Open End.

Its very name suggests what this type it is. It is a compromise, combining the best points of both the open and the closed end types. It is the one most generally used by corporations in the electric light and power field, for it makes allowance for the much needed future expansion, but also maintains the security of the bondholders.

Bonds may be issued at different times and in varying amounts, but they all may come under this same mortgage. The total amount of bonds that may be issued under the mortgage is stated in the deed of trust. Also the amounts of the issues must in no case exceed a fixed percentage of the value of the

former mortgage. This is, of course, a great objection to the
bondholders but it makes it more difficult for the mortgagee
to carry on future financing.

2. Open End.

This is actually the opposite of the closed end. For
there is no specified limit as to the amount of new bonds
or bonds that may be issued under it. This is not generally
considered to be a second mortgage, at least from the investor's
standpoint. For new issues of bonds may occur when there already
issued under the same mortgage. If they are not balanced by an
increase in assets equal to the amount of the new issue.

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poses the security of the bondholders.

Bonds may be issued at different times and in varying
amounts, but they all may come under this same mortgage. The
total amount of bonds that may be issued under the mortgage is
stated in the deed of trust. Also the amount of the interest
paid is no more than a fixed percentage of the value of the

new property purchased or constructed with funds received by the sale of these bonds.

D. Types of Special Mortgages.

1. Real Estate Mortgage.

"In the case of a real estate mortgage the mortgagee gives the mortgagor two instruments; the mortgage is described and a bond or note.--

"The essential difference between a corporate and an individual mortgage is in the matter of detail. As the corporate mortgages generally cover both complex assets and organizations as well as earning power, they are very long."¹ A separate one is not given to each bondholder but a trustee is appointed to be the recipricant of the mortgage in the name of the bondholder. Usually two trustees are named, one being a trust company and the other a United States citizen.

2. A Senior Mortgage.

A senior mortgage is one that is followed by one or more subsequent mortgages. The senior mortgage has a prior lien to these other mortgages.

3. Junior Mortgage.

A junior mortgage is subordinate in lien to one or more prior mortgages.

4. An Underlying Mortgage.

An underlying mortgage is usually a small one which has a lien prior to subsequent larger mortgages. In the field of public utilities it generally represents the mortgage of a subsidiary corporation.

1. "Financial Organization and Management" Charles Gerstenberg.

has properly purchased or contracted with bonds held by the
self of these bonds.

D. Types of Special Mortgages

1. First Mortgages

"In the case of a first mortgage, the mortgagee
gives the mortgagee two instruments: the mortgage is assigned
and a bond or note. --

"The essential difference between a corporate and an
individual mortgage is in the matter of details. In the corporate
mortgage generally cover both complex assets and operations
as well as working power, they are very large. A mortgage one
is not given to one individual but a firm is assigned to be
the recipient of the mortgage in the name of the corporation.
Usually two trustees are named, one being a bank company and the
other a United States citizen.

2. A Junior Mortgage

A junior mortgage is one that is subject to one or more
subsequent mortgages. The senior mortgage has a prior claim to
these other mortgages.

3. Junior Mortgage

A junior mortgage is subordinate in claim to one or more
prior mortgages.

4. An Underlying Mortgage

An underlying mortgage is usually a small one which has
a claim prior to subsequent larger mortgages. In the field of
public utilities it generally represents the mortgage of a sub-
sidiary corporation.

5. A Blanket Mortgage.

Such a mortgage as the name indicates, covers the property of the corporation. The holding company may issue a blanket mortgage to cover all the property of one or more of its subsidiaries. However, there may be specific underlying mortgages on certain parts of, or on all if, this property, that have a lien prior to that of this blanket mortgage.

6. Purchase Money Mortgage.

Such a mortgage is given in full or part payment for property, acquired by the corporation, on which it rests.

7. Mortgage on "After Acquired Property."

Sometimes mortgages are issued containing the so called, "after acquired clause," but this is not usually inserted in modern mortgages for the reason that it makes subsequent financing difficult. All future issues must be subordinate to this mortgage, although new property may actually be purchased or constructed with money obtained from this subsequent issue. That is, if the company is to build a new power plant it cannot secure funds for its construction by placing a first mortgage on it as it is being built for the old "after acquired mortgage" will have a prior lien even on this new property.

In the early days of public utility financing, we have seen how difficult it was for operating companies to secure funds even by bond issues. For this reason every inducement had to be given to the investor to make him purchase the securities of these operating companies. The after acquired clause was inserted

but it proved to be a boomerang for when they united to build new plants the investor furnishing the added capital wanted a first mortgage, but while these older issues were outstanding the corporation could not issue a first mortgage. I will give an example of how the formation of a holding Company was deemed necessary to avoid this type clause which had been included in an old mortgage.

Before New Jersey State Board of Public Utility Commissioner.

"The original financial structure of Public Service Corporation did not contemplate financing on the enormous scale now required to meet the rapidly growing requirements of the communities now served by its subsidiaries and it is not sufficiently elastic to permit of adequate financing now urgently needed by the gas company and particularly by the electric company."*

All of the property of this company was pledged to support a fifty year issue of gold bonds that had been sold in 1905 and that amounted to \$50,000,000. In addition to the "after acquired property clause" which was stringent enough, the deed of trust also provided that all stock issued thereafter be deposited with the trustee and become subject to the mortgage. It hardly seems possible that this type of indenture could ever have been issued and yet many operating companies were burdened by such mortgages and only succeeded in avoiding them when they became a subsidiary of a holding company or consolidated with another company.

* "Public Utility Reports" 1924E. Page 238

not as proved to be a promising one when they failed to sell
new plants the investor then turned to other sources
first capital, but while these were scarce with considerable
the corporation could not raise a dollar of capital. I will give
an example of how the corporation at a holding company and finance
necessity to avoid this type of loss which has been included in
an old company.

Below you find some facts which will help you

understand.

The original financial statement of the corporation
shows that the corporation has been in the business since
and reported to show the results of its operations at the
commenced and stated by the corporation and it is not yet
financially stable in a state of affairs. The corporation has reported
needed by the corporation and particularly by the financial
company."

All of the property of this company was located in
support a fifty year lease of land which was then sold in
1900 and then returned to the corporation in 1901. In addition to the
"other financial property" which was returned to the corporation
the land of the corporation was sold and the proceeds were
in deposited with the trustee and became subject to the
trust. The money was then used to pay the debt of the corporation
could not have been raised and the corporation could not
were included in such a position and only succeeded in selling
then when they passed a subsidiary of a holding company or an
collected with another company.

The plan that was submitted in this particular case contemplated the merger of the electric company and the gas company into one company to be called the Public Service Electric and Gas Company. The general mortgage could not have been sold in 1905 without the stipulation that no interest bearing obligation could be put ahead of it. It was also a closed mortgage. Representatives of the banking house of J. P. Morgan who testified at the hearing stated that under the new plan bonds could be issued bearing a $5\frac{1}{2}$ per cent rate while under existing conditions only Junior bonds could be issued which would command a different market and pay about 2 per cent higher rate. After considering all these factors the Public Service Commission of New Jersey approved the merger plan.

E. A Word of Caution:

Our esteemed bankers, it would seem have taken a page from the advertising book of modern competition, so well used by industry. They therefore issue "gold bonds" and all sorts of securities with "high sounding names," which in most cases mean absolutely nothing. They will call anything a bond. We hear of an issue of "bonds" by the Associated Gas and Electric System which are convertible into stock at the option of the company. Just another example of high finance. We don't mind if they call black white, if we are sure that the investor really knows what he is buying. It would be interesting at this point to review some of the modern issues which were analyzed in a circular distributed by the Associated Electric Company at the time they were putting on issue of "Gold Bonds" on the market. They tried

The plan that was submitted in the preliminary stage

contemplated the merger of the electric company and the gas

company into one company to be called the Public Service

Electric and Gas Company. The general intention was to have

from 1900 to 1905 without the electric company being

bearing obligation upon the gas company. It was also a

closed mortgage. The representation of the electric company

was that the electric company was to be the controlling

the new plan would be to have the electric company at 25 per cent rate

while under existing conditions the gas company would be

at 10 per cent rate. The electric company would be at 25 per

cent rate. After considering all these factors

the Public Service Commission in the summer of 1905 the merger

plan.

2. A Word of Caution:

Our readers must be warned. It would seem to have been a

from the advertising point of view, competition, as well as

by industry. They should be warned "Beware of the gas company"

and "Beware of the electric company." It is in fact a

absolutely nothing. They will find nothing to fear. The

the issue of "Beware" by the Associated Gas and Electric

which the commission has acted at the public of the

that another example of this kind. We don't think it

place with it. It is not true that the electric company

be in danger. It would be interesting to see what

some of the modern houses which were destroyed in a

distributed by the Associated Electric Company at the

were putting on issue of "Beware" on the subject. They

to make favorable comparisons between their issue and issues of twenty one well known holding and operating companies.

These are "Gold Bonds" so our interest is aroused immediately. This sounds much better than collateral trust bond. The circular states "It was impracticable to endeavor to accomplish this end (i.e. high investment qualities and stability of income) through the medium of a mortgage bond issue secured directly by fixed properties.-- Therefore, the Associated Electric Company Indenture provides for the issuance of bonds which, while not directly secured by a lien on physical property, are protected by covenants and restrictions designed to make them the practical equivalent of an ordinary first and refunding mortgage obligation and to give them additional advantages which are not found in the usual mortgage bond.

"These bonds were then devised to provide in a single security the protections customary in an operating company bond, other than that of actual lien and the economic advantages of holding company obligations."* How glibly it states "the protections--other than that of actual lien." What a paradox. Is not this the most important and basic element of a real bond issue? It is this protection that actually separates the bondholder from the stockholder. In addition the chart compares this issue with other issues that have very little in common with the exception of certain provisions that in respect to the Associated issue mean little or nothing for although its deed of trust contains them they in the most part deal with the security of actual real property behind bonds. These bonds are not legal for New York Savings Banks. Finally every other issue

*"Comparison of Indenture Provisions of Assoc. Gas & Elec. 4½% & 5% Gold Bonds" by General Utility Securities, March 25, 1931.

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in the chart with which this issue is compared is issued secured by a lien on fixed property. You would be just as correct in comparing the strength of Gibraltar to that of a sand dune in the Sahara, and perhaps more so.

The title of a bond means almost nothing. It may be a "First and Refunding Mortgage Bond." To the uninitiated investor this frequently signifies a first mortgage bond. Actually it usually means that it is a first refunding issue but not a first mortgage issue. In the entry prospectus, it did not definitely state what the security was behind these "Gold Bonds" and yet they were sold on the information therein contained which was of course glorified by high pressure salesmen who themselves are not supposed to be able to tell a bond from a stock.

F. Equipment Trust Certificates.

It frequently happens that corporations borrow in order to purchase specific equipment. In such instances the equipment so purchased is the security behind the loan. The ownership of the equipment remains legally in the name of the trustee until the debt has been paid. In the meantime, however, the debtor has possession of the equipment and the right to use it. This type is used mainly by railroads and only to a small extent, by electric light and power companies.

G. Collateral Trust Bonds.

These Bonds are secured by the pledge of securities owned by the corporation issuing the collateral trust bond. In the case of a public utility holding company, the collateral behind these bonds is usually the stocks or bonds of its subsidiaries. Of course, a bond is no better than the specific

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security behind the bond plus the credit standing of the corporation issuing it. However, many people during the era from 1920 to 1930, bought collateral trust bonds, little knowing what they were actually buying.

An example of the way that some Companies misled the public is given in the following quotation. "The new holding corporations topping off these recent consolidations depend, of course, for their income upon dividends paid by the operating companies. They have little, if any, real property which can be mortgaged by bond issues directly. What they do, therefore, besides selling preferred shares of stock, is to mortgage the income from their investments in shares of these subsidiaries, through the sale of collateral trust bonds, secured by deposit with a trustee of these self same shares.---Concerning the bonds of these holding companies, then, few people understand that they are not a true bond in the sense of being a mortgage upon property. These collateral trust bonds are not permissible, as are the latter mortgage bonds, for investments of savings banks in a conservative state like Massachusetts, which limits such investments to mortgages upon operating companies with direct liens upon property. Now is it true---that the bonds of these holding companies constitute the only funded debt of the company; if perchance there is an odd million or so of bonds of the subsidiary companies which have a prior claim upon the same income. The legend on the prospectus of the Northeastern Power Corporation in 1926 'No Funded Debt' fails obviously of a statement of the truth, that every bond outstanding of the subsidiary corporations stands ahead of the holding company issues. The

prime test, therefore, of financial stability for these holding companies, particularly for the preferred shares which come after bond issues, is that such mortgages should not be issued in excess. And yet in some instances, the proportion of bonded indebtedness rise as high or higher for such holding companies than it customarily does for operating companies. It should be said that the present tax policy of the Federal Government puts a premium upon such financing by holding companies, as well as others inasmuch as the deduction of interest upon such borrowings before computation of the tax upon net earnings is permissible."¹

"In 1925, the fixed charges of the National Public Service Corporation, a holding company, on account of funded debt ranges about 70% of net earnings and seem still on the increase disproportionately."¹

II) Unsecured Loans .

An unsecured creditor has no direct lien on any of the property of the corporation but has only the signature of the company as the evidence of their legal liability and their good faith to pay their debt. The loan is made on the basis of the credit standing of the corporation.

A. Bank Loans .

Bank loans from the standpoint of the banker are essentially loans which should be used to supply to concerns with temporary working capital. They are frequently used when a company's business is at its peak. A public utility does not need working capital as does the average industrial or commercial corporation.

1. "Main Street and Wall Street" P. 315

The utility corporation does not need to make bank loans on certain occasions. Sometimes it wishes to start construction before bond issue can be floated and so it borrows from the bank, paying off this loan as soon as it receives the funds from the sale of its new bond issue. In addition, during a time of tight money it might need to borrow from a bank to secure funds to meet a maturing obligation. It would then pay off the loan with funds received from note or bond issues.

B. Notes.

Notes usually occupy the intermediary position, in respect to their duration, between bank loans and bonds. They usually run for a period of from one year to five years. They are generally issued in lieu of bonds at a time when money rates are high and when it seems advisable for the corporation to put off any long term financing. They are frequently used to take care of temporary refunding operations at such times. The corporation would have to pay a high rate of interest on bonds issued at such a time and it would have to pay this rate during the entire life of the bonds. If it waits a few months or a year or more it may be able to issue bonds at a lower cost to itself.

C. a. Debenture Bonds

I want to emphasize the fact that debenture bonds, no matter how they are window dressed, are in the last analysis, merely promises to pay. In a foregoing section I have indicated that special names may be given a bond that are practically meaningless.

The ability to pay for the loan is the first consideration.

Second, the loan must be repaid. This is a very important consideration. The loan must be repaid in full, and the borrower must be able to do so. The loan must be repaid in full, and the borrower must be able to do so. The loan must be repaid in full, and the borrower must be able to do so.

3. Repayment

When you apply for a loan, the lender will want to know how you plan to repay it. This is a very important consideration. The lender will want to know how you plan to repay it. This is a very important consideration. The lender will want to know how you plan to repay it. This is a very important consideration.

4. Collateral

Some lenders will require you to provide collateral for the loan. This is a very important consideration. The lender will want to know how you plan to repay it. This is a very important consideration. The lender will want to know how you plan to repay it. This is a very important consideration.

5. Interest

The security behind a debenture like that behind a note, is the name and credit standing of the corporation. However, as the note runs longer than a bank loan, the credit standing of the corporation should be more thoroughly analyzed in the former case.

The holder of a note has no lien of any kind on the property of the corporation. All the secured creditors as mortgage bondholders have claims that are prior to his in case of liquidation. He has no mortgage on which he can foreclose. Because of these factors, a debenture bond should not run for as long a period as does a regular bond issue for as its security is merely the credit standing of the corporation, this may be impaired much more quickly than the actual security of specific property, particularly as the latter must usually be well maintained in accordance with provisions appearing in the deed of trust.

Electric Bond and Share in 1919, issued one hundred year debentures. What is the present value of a sum of money payable in one hundred years? Of course, these bonds sell in relation to the interest being paid and also on the credit of the corporation. However, most economists feel that the present value of the face amount of a promise to pay a sum of money in one hundred years is about zero.

b.) By Selling Stock.

"The fundamental differences between bonds and stocks should be clear. The former are contractual obligations to pay a certain sum of money and interest at a definite rate and at the times set forth in the contract. Stocks on the other hand;

evidence ownership rights to participate in the earnings and management of the corporation. Simple as this distinction appears the evolutionary process which has gone on in corporate finance has resulted in the emergence of securities which are more or less intermediate between purely contractual obligations, on the one hand, and outward evidences of ownership on the other. The income bond can hardly be designated a full contractual obligation for the payment of interest is generally contingent on the earnings which the corporation can produce. Preferred stocks are on the other side of our dividing line, yet they are not, strictly speaking, ownership securities. In the main their rights to participate in the earnings of the company are quite definitely limited and not infrequently their right to vote at stockholder's meetings, is denied or limited."¹

"The stock of a corporation is the aggregate ownership of a corporation and is divided into identical units or groups of identical units called shares, by written instruments called certificates of stock."²

Ownership of stock does not mean ownership of the assets of the corporation but merely ownership in the equity of a corporation, remaining after all debts have been paid, or ownership of the corporation itself.

A I Common Stock.

Common stock represents the residual ownership in the business after all prior obligations have been met. The common stockholders enjoy full ownership in all assets and earnings after prior claims have been satisfied but they are likewise charged

1. "Financial Organization and Management" Charles Gerstenberg P.112

2. "Investment Principles and Practices" by Badger P.206

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with all the obligations evident to ownership.

During the period from 1920 to 1930, the public was constantly clamoring for common stock and investment bankers certainly answered their pleas with a deluge of public utility holding company stocks. The greater part of public utility financing was done through the media of common stock flotations. The title of McNeils book, "Sick in Bed with Common Stocks," aptly describes the predicament of many people who bought public utility stocks at the height of the boom. It is, of course, true that the purchases of all stocks during the speculative period, have sustained great actual or paper losses. However, the purchases of utility stocks including those of holding companies were impressed with the stability of the electric light and power industry. They were not familiar with the effects of pyramiding by which the income of the top holding company fluctuates greatly with only small variations in the income of the subsidiary operating companies.

The Common stockholder is supposed to enjoy certain fundamental rights, one of the most important of which is the right to vote. However, during the last ten years this right has been gradually taken away from a large class of stockholders. Ripley in discussing in Main Street and Wall Street, "the attempts to disenfranchise the public shareholders, the management abrogating to themselves all place and power in management,"---says "there has been almost unanimous concentration of all these devices which are intended to wrest from the common shareholder his traditional right to participate by voting in the conduct of the business in which he may happen to

with all the limitations referred to above.

During the period from 1910 to 1915, the points were

constantly changing for common stock and investment securities

constantly answered their own right of ownership of the stock.

holding company status. The answer was no longer valid.

Therefore we have through the right of ownership, stock ownership,

the title of the stock, which is not the same as the

right described the ownership of the stock and the right to

control the stock of the company, it is of course,

that the ownership of all stock during the period

period, have remained great actual or legal interest, however,

the ownership of all stock during the period of the

company were represented with the ownership of the stock.

light was given to the fact that they were not identical with the

right of ownership by which the stock of the company

company ownership was given with the right to control the

stock of the company ownership.

The company ownership is not the same as the

ownership of the stock, but the right to control the

right to vote, however, during the period of the

and has generally been taken away from the stock of the

holders. They are distinguished by the fact that the

the attempt to distinguish the stock ownership, the

management belonging to the stock and power in

management, there have been almost constant changes

tion of all these devices which are intended to prevent the

company ownership his ownership right to participate in

control in the conduct of the business which he has no right to

have a proprietary interest. How far matters have already progressed may be gathered by the statement, that of \$1,500,000,000. of publicly held securities of twelve major holding companies serving electric light, power gas and water in the United States in 1925, the equity common stocks, in which are vested the complete control amount to only ten percent of that stupendous total. In other words, a ten percent ownership, most of which cost the present owners not a penny, carries' control of the entire remaining nine tenth of the participation. The direct attempts to disenfranchise the shareholders are aided by other factors not the least of which is their seeming unwillingness to exercise their right to vote even when they do enjoy this right. This, of course, merely emphasizes the effects of actual disenfranchisement. In this connection the use of the proxy by the management of many companies is considered an evil. Many stockholders sign these proxies allowing someone to vote in their stead, with very little consideration of the results. Of late years the fight between opposing factions, to gain the majority of the proxies, has been very illuminating."

II) Par Value Stock.

Usually stock is given a so called par value which supposedly represents the investment of the shareholders of the corporation. "Par value in the case of common stock, therefore, is significant only when used in connection with the capital stock account of the corporation to express the fractional participation, going with each share of stock."¹ If the stock has been issued in all cases in exchange for values equal to or

1."Investment Principles and Practices" by Badger P.232

have a proprietary interest, but the matter was already

expressed as to be gathered by the statement, that as

of \$500,000,000 of public debt, which was the

holding companies serving America in 1914, before the war

in the United States in 1914, the public common market, in

which are vested the complete control, amount to only the amount

of that stupendous total. In other words, a few persons

control, most of which cost the general public not a penny

control, control of the entire national life of the

participation. The direct attempt to distribute the share-

holders are asked to share in the profits of the

their national wealth, to control their right to vote and

when they do enjoy this right. This is a serious matter, for

question the effects of actual distribution. In this con-

nection the use of the word "control" is very important

is considered an evil. Many Americans also share in this

allowing someone to vote in their right, who very little con-

sideration of the results. Of this point the United States

giving freedom, to control the majority of the people, and

been very illiberal."

11) For value added.

usually stock is given a so-called net value which

unusually represents the difference of the shareholders of the

company. For value is the cost of company stock, therefore

is significant only when used in connection with the capital

stock account of the corporation to express the difference be-

between, going with each share of stock. If the stock has

been issued in all cases in exchange for value, then it is

1. "Investment in industry and production" by Robert L. Hall

approximating the true par value of the stock, the capital account will show approximately the investment made by the shareholders.

III) No Par Value.

During the last decade many corporations have issued no par value stock. Most of the public utility commissions insist that operating companies issue only par value stock, and that the values received by the corporation in exchange for it shall closely approximate its stated par value. However, as they have no control over holding companies unless the latter are also operating companies, these holding corporations may issue no par value stock wholesale.

No-par value stock has no particular stated value either on the books of the corporation or in the face of the stock certificate. In 1922 thirty two states out of our forty eight had passed laws permitting the issuance of this class of stock, as contrasted with only 1912, notably New York State. In the year 1922, eleven percent of the charters filed in New York made allowance for the issue of no-par value stock.¹

A. Criticisms of the class of Stock;²

1. It would tend to release the promoter from positive liability for over capitalization of an enterprise at the outset. There being no-par value there is no obligation to pay in any stated sum per share.

1. "Financial Organization and Management" by Charles Gerstenberg
P. 117
2. "Railroads Finance and Organization" by William Z. Ripley
as noted in "Financial Organization and Management" P. 117,
by Charles Gerstenberg.

aggregating the sum per value of the stock, the capital account will show a credit for the interest made by the shareholders.

III) No per value.

During the last decade many corporations have issued no per value stock. Now at the public utility companies, interest that operating companies issue only per value stock, and that the value received by the corporation is equivalent to the value of the stock. The value of the stock is also approximately the same as the value of the stock. As they have no control over holding companies, they have no control over holding companies, these holding companies may have no per value stock at all.

Per-value stock has no particular stated value

either on the books or the corporation or in the case of the stock certificate. In 1901 thirty two states and in one territory had passed laws providing the issuance of this class of stock, the corporation with only 10% of the value of the stock. In the year 1901, eleven percent of the companies filed in New York made allowance for the issue of no-per value stock.

A. Criticism of the class of stock.

1. It would tend to reduce the amount of positive liability for over capitalization of an enterprise at the outset. There being no per value there is no obligation to pay in any stated sum per share.

1. "Financial Organization and Management" by Charles G. Loomis
2. "Financial Principles and Organization" by William A. Loomis
3. "Financial Principles and Organization" by William A. Loomis
4. "Financial Principles and Organization" by William A. Loomis

2. The equivalence of assets and capitalization which ought to obtain in the case of a company holding valuable rights for the public, become non existent. And what is of great importance for the future under the growing tendency to ascertain the physical valuation of the property, all standards by which to readily measure the reasonableness of the general scale of charges disappear.

3. The scientific accountant must have some absolute basis for his bookkeeping. Without some starting point, the relation between a fair return upon the investment and a surplus arising either from issue of shares at a premium or inordinately high rates becomes difficult to state.

4. And finally, the abolition of par value permitting the carriers to issue capital stock for relatively small sums in cash but encourage speculation in railways, an element of danger to be deplored.

Charles Gerstenberg states that Ripley assumes "that when there is stock without par value there is a dollar capitalization" when he says "in fact an enterprise that issues only stock without par value is not capitalized on a nominal basis at all. The net assets are divided into units, the more units the less value of each one. The issue of no par value stock wipes out the fictitious valuation of the aggregate ownership in a corporation, which arises when the units of ownership are given an artificial nominal value. They simply take the value of the assets less the liabilities and divide it among the units." He fails to recognize the chance for manipulation. He speaks several times of the value of the assets. Does he not know that

1. The equivalence of assets and liabilities which ought to obtain in the case of a company limited by shares for the public, becomes non-existent, and what is at first a guarantee for the future under the greater tendency to increase the physical valuation of the property, all standards by which to readily measure the present value of the company's assets are thereby destroyed.

2. The scientific accountant must have some absolute basis for his bookkeeping. Without some starting point, the relation between a fair return upon the investment and a surplus arising either from assets of value or a surplus of liquidation high rates become difficult to state.

3. And finally, the abolition of the value principle the certificate to issue capital stock the relative value of the assets and liabilities is not maintained in value, an element of danger to be recognized.

Charles G. Lummus states that higher returns "when there is stock without any value there is a better result" when he says "in fact an enterprise that does not stock without any value is not capitalized on a national basis at all. The national and divided into units, the units are the least value it can give. The value of the units is given out the division valuation of the enterprise is given in a corporation, which arises from the units of ownership given to each individual member. They might give the value of the assets less the liabilities and divide it among the units. He fails to recognize the change for participation. He does not know of the value of the assets. Does he not know that

when we wish to find the book value of par value stock, we can and do it in the manner he has just indicated? We might find that it was very much greater than the par value and we would want to know the reason why. If we have no-par value stock we would have no basis for comparison. Consequently the company may write up its assets to any amount thus enhancing the book value of the stock. If we look over the valuation accounts of the holding companies and witness the write ups over the last few years, the attempts to increase the book value of their no-par value stock by increasing the book value of their assets, and of the assets of their subsidiaries will be glaringly apparent. When a group of bankers buy up a property for \$970,000. as they did in Montana and then almost immediately incorporate it under the name of the Montana Power Company, whose sole assets were those of the two concerns purchased for \$970,000., with net assets which were valued on the books of the new corporation at \$5,000,000., it is interesting to say the least. No fictitious value here? Of course not.

Again we might glance at the books of the Electric Bond and Share Corporation directly after the formation of the present company by the Consolidation of the Electric Bond and Share Company and the Electric Bond and Share Securities Corporation in February 1929. We will just note one item, Investments in American and Foreign Power Company appear on the books of the new corporation at \$493,265,954.5. If we look at the books of the old corporation we find that just prior to the consolidation these identical securities were carried at a figure of

\$94,064,127.¹ I don't think this item needs any further elabo-

1. Exhibit No. 4597 - Federal Trade Commission Investigation of Holding Companies.

ration for we find that the increase was simply balanced by the fictitious value given to the no-par value stock of the new Electric Bond and Share Corporation.

The stockholders receive dividends only when they are declared by the directors. They are not entitled to a regular fixed return as are the bondholders of the corporation. Most states have laws which states that dividends cannot be paid unless earned. However by manipulation corporations which have no-par value stock simply write this down and create a fictitious surplus and are thereby permitted to pay dividends. This is essentially the procedure that Electric Bond and Share Corporation is following in 1932. Would it not be better for them not to pay out any dividends unless they are actually earned?

IV. Preferred Stock.

Preferred stock, as the name indicates, carries with it some preference over the other classes of stockholders. They may be preferred as to dividends, or as to assets. The holders of this class of stock usually receive a stated income which is expressed either as a percentage of the par value of the stock or as a specified amount expressed in dollars.

Preferred stock can usually be redeemed by the corporation at its option. In the absence of any special contract it is usually carries the rights of common stock, although in many states it is also given the additional right of being cumulative as to dividends. Usually preferred stock issued during the last few years has not enjoyed the voting privilege.

The sale of preferred stock by public utility companies has been in the main the result of their customer ownership campaigns which we will discuss later.

V. Guaranteed Stock.

Holders of guaranteed stock usually enjoy the advantage of having either their dividends or part of their original investment guaranteed by another corporation. In the public utility field we sometimes find that the parent or holding company will guarantee the stock of its subsidiaries. Usually the holding company prefers to hypothecate the stock of its subsidiaries and issues their own on this basis. Of course, the guaranteed stocks are only worth as much as the credit of the guaranteeing corporation plus the equity in their own company. In point of law this guarantee is not very strong and the courts have not gone very far in forcing the guaranteeing corporation to keep to their agreements if they get in difficulties themselves.

VI. Watered Stock.

If a corporation issues stock that is not backed by sufficient assets, the corporation is said to be overcapitalized and its stocks are classed as watered. This practice of course injures the credit standing of the corporation. In the early days some of the utility corporations had to use every means of attracting capital. They therefore issued stock as a bonus to the purchasers of their bonds. This stock was watered but if the management was proved efficient and conservative the assets of the company might be increased to a point capable of supporting the entire capitalization. The practice however of many of our holding companies of issuing bonus stock in large quantities

The sale of preferred stock by public utility companies

has been in the main the result of their financial necessities

and it is to be expected that this will continue to be the case.

V. Guaranteed Stock

A feature of guaranteed stock is that it is not subject to the same

at par value as other forms of stock and is not subject to the same

percentage of interest as other forms of stock. It is not subject to the same

percentage of interest as other forms of stock and is not subject to the same

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percentage of interest as other forms of stock. It is not subject to the same

VI. Preferred Stock

If a corporation issues stock that is not subject to

percentage of interest, the corporation is said to be authorized

and the stock is said to be authorized. It is not subject to the same

percentage of interest as other forms of stock. It is not subject to the same

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percentage of interest as other forms of stock. It is not subject to the same

during the last few years can not be justified at all.

VII. Classified Stock.

In a few instances some common stockholders enjoy a preference over others as on the payment of dividends. Their position is really that of preferred stockholders.

In the public utility field we find that many holding companies have been of late years issuing several classes of stock ex: as Class A, B, and C.

All too frequently one of these classes of stock will enjoy the sole privilege of voting. This class is usually the smallest and is held by bankers, promoters or by the present management who more often than not, have paid nothing for it. Promoters may organize the corporation and then sell their ownership in it at a large profit, at the same time retaining this special class of stock and thereby the management control. They both eat their cake and have it. They control the corporation and yet they have no investment in it. This is a bad state of affairs for it leads to all sorts of mismanagement.

VIII. Treasury Stock.

It is the corporation's own stock which the latter has acquired either by direct purchase or by gift. It may appear on the balance sheet as an asset. However it is not considered good policy to have this account for a very large percentage of the assets. The question is what value to place on these stocks, especially in a market like we have in 1932.

IX. Sinking Fund Stock.

Some corporations maintain a sinking fund, the purpose of which is to build up a fund with which to purchase some of the

During the last few years and not so far back as 1911.

VII. Classified Stock.

In a few instances some common stockholders who

possess more than one share in the company at different times.

position is really that of a shareholder.

In the United States it is not the case that

companies have been of late years largely owned by

stock and as shown in Table A, B, and C.

All the property of the company is owned by the

company and is held by the company. This is usually the

method and is held by the company. It is the present

method and is held by the company. It is the present

method and is held by the company. It is the present

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VIII. Treasury Stock.

It is the company's own stock which the latter has

acquired either by direct purchase or by gift. It is not

the company's own stock which the latter has

acquired either by direct purchase or by gift. It is not

the company's own stock which the latter has

acquired either by direct purchase or by gift. It is not

IX. Dividend Fund Stock.

When a corporation maintains a dividend fund, the purpose of

which is to hold up a fund with which to pay dividends

outstanding stock of the corporation. It is looked on as a measure for lessening the risk incurred by the stockholders for the residual shown on the assets is then subject to divisions owning a smaller number of units and is therefore larger for each unit than it was when a larger amount of the stock was outstanding. Of course, to really affect this the stock so purchased must be cancelled and so not held by the corporation as treasury stock. We rarely see this kind of stock in the utility field. It is an expression of ultra conservative management. In addition we have already noted the requirements of the utilities for expansion and consequently any surplus funds which they have should be used for this purpose of expansion.

X. Convertible Stock.

This stock is convertible into other forms of the corporation's securities such as preferred stock or bonds.

The conversion privilege is usually exercised at the option of the stockholder. However generally stock cannot be converted into bonds without the consent of the corporation.

XI. Bankers Shares.

They are non-voting certificates of beneficial interest in the corporation. They are used by some companies when they wish to sell their stock in small units.

XII. Special Stock.

This generally signifies that the stock is in some ways similar to a debenture, the dividends being a liability of the corporation, even before they are declared.

XIII. Redeemable Stock.

The corporation usually enjoys the option of redemption

outstanding stock of the corporation. It is known as a
measure for increasing the value of the corporation
the residual claim on the assets is then reduced to nothing
owing a smaller number of shares and is therefore lower per
share than it was prior to the stock split. The stock is not
standing. In a sense, the value of the stock is not
reduced since the corporation has not paid out any cash or
property. The value of the stock is the same as before.
It is an expansion of the ownership of the corporation.
In addition, the corporation has not changed its
position for anything. The corporation has not changed its
position for anything. The corporation has not changed its
position for anything.

X. Convertible Stock

This stock is convertible into other forms of the
corporation's securities such as preferred stock or bonds.
The corporation is not in a position to convert any of the
stock of the corporation. The corporation is not in a position
to convert any of the stock of the corporation.

XI. Preferred Stock

They are non-voting securities of the corporation.
In the corporation, they are not to be paid out when they
also to call their stock in a cash basis.

XII. Special Stock

This generally signifies that the stock is in some way
related to a debt. The dividend is a liability of the
corporation, even before they are received.

XIII. Redeemable Stock

The corporation usually, before the stock is redeemed

because it can only redeem this stock if it has a surplus equivalent to the value of the stock to be redeemed.

because it can only reduce the stock in the hands of the
refugees in the value of the stock to be reduced.

The Growth of the Holding Company

1. Introduction

In the introduction we have seen that while electricity had been discovered in 1817, it was not put into practical use until the Edison Plant was established in New York City in 1890. As a result of the successful operation of the Edison's Company's station, other companies were found to serve local communities elsewhere these plants were very small and they were only capable of serving the communities directly adjacent to them. The generating units themselves had only a small kilowatt output, and were grossly inefficient in comparison with our modern dynamos. Unit costs were high and therefore rates were correspondingly high and electricity was only available to the well to do class of domestic consumers.

The capital needed to organize and equip these companies was generally secured locally. As business conditions in a particular community fluctuated, so likewise did the income and prosperity of these early stations. If breakdowns occurred, the customers were found to go without service until the trouble was remedied for naturally interconnections between these plants that were usually quite a distance from each other, were not feasible.

The first central generating stations were as we have seen, located in the large cities. In the very beginning they frequently served an area of about four square miles. About 1895 the art of generation had advanced considerably, with the result that these small initial plants were superceded by large stations that supplied the entire surrounding community. Small generating plants were built in communities having a population of five thousand or over but districts with a smaller number of inhabitants were entirely without electric service.

The plants were used mainly to furnish current for lighting and many of the smaller companies only operated at night. As the electrical motor was perfected, a new industrial demand was stimulated. However as rates in many of the small plants were as high as twenty cents per kilowatt hour there was not much industrial demand in the early period.

If we consider the type of demand that most of the early domestic demand consisted of we will see other reasons for this high cost. A plant catering primarily to domestic lighting customers has an annual load factor of only about fifteen percent of capacity. This means that the capacity of the plant is only utilized during those hours when people are using electric lights. Of course these means only a few hours out of the total of twenty four. The capital invested in plant and equipment is actually earning a return during about 1750 hours a year; which is equivalent to about seventy three full days out of a possible three hundred and sixty five. Of course the domestic customer had to pay rates high enough to yield a good yearly return to the investor on an investment that was only utilized for one fifth of that time. An expansion of business in the domestic lighting field alone would not have decreased the rates a great deal. The holding company provided the means of expanding the business to include industrial or power service which resulted in a more diversified output. Though the use of interconnections peak loads were evened out and the total reserve capacity needed was reduced.

As the demand for current grew the local utilities found it increasingly difficult to secure funds needed for expansion. The public at the same time, began to demand a higher type of service; standards even determined and a more reliable type of service was required. The operating companies had secured their initial capital through the sale of bonds, the stocks that were

The plants were built mainly in the early years of the
1920s and many of the smaller enterprises were destroyed in the
the electrical sector was particularly affected, a fact which was
estimated. However, as far as the small plants were
high as twenty cents per kilowatt hour, there was not much
trial demand in the early period.

It is considered that the demand for power in the early
domestic demand consisted of the small and medium plants for the
high cost, a plant costing upwards of \$100,000 was not
found to be an unusual fact of life at that time, and
of capacity. This means that the majority of the plants were
utilized during those hours when power was being produced, and
of course there was only a few hours out of the total 24 hours
year. The capital invested in these and other enterprises was
earning a return of about 10% per year, which is not
about 10% per year, and the fact that the plants were
hundred and fifty five. It shows the domestic industry was
pay rates high enough to yield a good profit return to the
year as an investment, but was only sufficient for one fifth of
that time. An expansion of business in the domestic industry
trial alone would not have been sufficient to yield a good profit.
to the industry provided the means of expansion in the early years
locality industrial or power sources which resulted in a more
reduced output. Though the use of hydro-electric power plants
were avoided and the local reserves rapidly depleted and reduced.
As the demand for power grew the local industry was
it increasingly difficult to secure funds needed for expansion.
The limits of the local industry began to be reached in the early
section, standards were deteriorated and a more realistic view of
industry was required. The government considered the situation and
industrial capital required the sale of bonds, the electric power

issued being in most cases offered to the purchasers of bonds as a bonus for investing in such a risky field.

The methods used in the early days while probably justified at the time have no justification at the present time. The method most commonly used when the holding company first entered the field is described by Nash in his book "Economics of Public Utilities". "Usually the way was to sell securities in blocks, including either a bond or ten shares of preferred stock or both, and several shares of common stock sold at a price not above the par value of the bonds plus the par value of the preferred stock.- - -

"In such financing plans a portion of common stock was frequently retained by the contractor, investment bankers or by the holding company, in payment for risks in constructing the property or disposing of its securities and possibly also in partial payment for services. The par value of these stock holdings of the contractor and banker has often been of substantial amount. The real value of their holdings, however was wholly contingent upon the success of the project. If full payment in cash had been demanded by the contractor or bankers, or both, for their services it would not have been possible to finance many such projects because of the risks involved in finding a market for unknown and untried securities.

"It has often been contended that common stock issued as described above, is nothing but "water", and even where this term has not been applied it has been customary to refer to common stock issued in blocks with bonds or preferred as "bonus". A clever analysis of the situation at that time - - - indicates that neither term is appropriate. The payment in stock to the contractor and bankers amounts to a contingent fee, the value of which depends upon the ultimate success of the property and its ability to pay.

If the property succeeds and renders essential service to the public, and the original undertaking could not have been launched under any other plan of financing, a substantial value accrues to the public through the risks incurred in launching the project, which risk is represented by the common stock." *

The holding companies were able to gradually float equity securities and thus relieve the utilities from becoming topheavy with mortgage debt. Undoubtably the most pressing problem of the time that was solved by the advent of the holding company, was that of obtaining capital for purposes of expansion. The tremendous amount of capital needed is characteristic of the growth of all the units in the field. Utilities even after they have been started are not able to finance through the use of their excess earnings like industry often does for they are allowed to charge rates that yield very little excess earnings. The amount of capital investment averages about 5 dollars for every one dollar of revenue.

Far seeing engineers realized that if unit costs could be reduced so that electricity could be sold at low wholesale rates, a large industrial market would be available.

2. THE EARLY TYPES OF HOLDING COMPANY:

The first holding companies were formed from the consolidation of adjacent urban properties. "The principal evil in these earlier developments was the large over-capitalization and the excessive fixed charges placed upon the properties. In nearly all of the large municipal systems there is an altogether disproportionate amount of bonds and stocks outstanding, or excessive rentals paid upon leased properties compared with the reasonable investment actually required in the proper development of the systems. In spite of the advantages of the combined properties, operation has usually been handicapped by the excessive

fixed charges and efforts to pay dividends upon the common stock outstanding. The management in struggling with over-capitalization has been constantly impelled to skimp service, cut down on maintenance and renewals, keep up rates to the public and particularly not provide sufficient reserves and surplus against periods of low earning.

- - - - There was also in nearly every step various financial manipulation including high issues of securities to the promoters, profiting on inside construction contracts, misrepresenting the earning power of properties, not providing sufficiently for maintenance and depreciation, paying unearned dividends, creating fictitious market values for the stock and unloading on the public securities at prices far beyond the intrinsic earning power.

- - - - These excessive burdens rest upon the properties today and form one of the chief problems of regulation." *

a) The First Type

After 1889 we had the first active acknowledgment that the electric power operating companies needed the facilities and backing of large corporations which could secure the capital of which the industry was in such dire need.

The operating companies needed machinery and equipment and had been offering their securities as payment. "The manufacturers, prior to 1890, sought ways in which to realize their holdings of securities taken in part payment for apparatus, pending absorption of the operating company's securities by the general public. The Thomson-Houston Electric Company on four occasions prior to 1890, resorted to the device of lumping together its holdings and depositing them with trustees who issued trust certificates backed by the securities of the operating companies.

"These trust certificates were offered

* "Public Utility Regulation" by M.L. Cooke-Chap. Vllll by
- 68 John Bauer, Financial Consultant, New York City

to the stockholders of the Thomson-Houston Electric Company for cash. Gradually as the market developed for the underlying securities they were disposed of and the trust certificates were redeemed in cash.

"In 1890 the Thompson-Houston Electric Company in order to render more effective assistance to the various local central station companies which had become its licencees organized the United Electric Securities Company with offices in Boston, Massachusetts.

"This latter company ^{gave} its preferred and common shares to the Thomson-Houston Electric Company in payment for operating company securities, then in the company's treasury. The preferred shares were then sold to the public and the common stock remained in the possession of the Thomson-Houston Electric Company. The purpose of organizing the United Electric Securities Company was to assist in the financing of local lighting companies by purchasing all, or some portions of, the issues of bonds of those companies for which there was at the time no general banking demand. These bonds were then deposited with a trust company and against them the United Electric Securities Company issued its own collateral trust bonds.

Similarly the Edison interests, which were subsequently consolidated into the Thompson-Houston Interests in 1892, organized the Edison Electric Lighting Company during the early eighties, to act as a holding company for stocks of local lighting companies that had exchanged their stocks for licenses to operate under Edison patents. - - - -

"The Thompson-Houston Electric Company was one of the predecessors of the General Electric Company. At a later date these same interests organized the Electric Bond and Share Company, which we will discuss later, for the purpose of making the common

stock of local operating companies more attractive and at the same time enabling them to secure their necessary equipment.- - - -

b) The Second Type

1. "But the need of the electric power and light industry for capital was greater than could be supplied by the manufacturers of electrical equipment, and a field for other financing was opened. The directors of small operating companies had found it incumbent upon them to secure capital necessary for expansion by offering their securities in the large financial markets. Usually these operating companies were not well known and as a result their securities were sold at a great discount. Certain financiers realized that if a group of these operating concerns could be joined under the same management directed by these large bankers, they would be able to float their capital issues at a more satisfactory return than could be realized if they were sold backed only by the credit of the local company.- - - - "*"

Weaknesses were evident in the utility structure. The small operating companies had not secured much of their capital by the sale of stock either because they did not consider it good business or probably because they had been unable to do so. As a result their capital structures were out of balance; they were too heavy with bonded indebtedness. And furthermore as I have indicated in the section on mortgages, these early companies had issued very rigid mortgages containing the so called "after acquired clause" and usually being of the closed-end variety. We have seen how necessary it is for public utility companies to secure capital funds for expansion. These companies finally found that they could not secure the needed funds for the investors demanded senior issues and all they could give them were junior issues. It was only by consolidating or by forming a holding com-

pany to control several of these local units that such restrictions could be circumvented.

"Already in the gas industry companies had been formed to assist in the development of gas plants. In 1882 the United Gas Improvement Corporation had been formed to control gas operating companies and aid them in their financing. This company was in many ways the forerunner of the modern public utility holding company. At first the company followed the practice of leasing a number of gas companies in scattered communities but in 1884 the management began to secure control of the stock of these same companies. As the Pennsylvania law prohibited one corporation from holding stock in another, the stock was at first deposited with a trustee. The next stage of the development came with the purchase of the old Union Company which possessed extremely broad powers, and the changing of its name to the United Gas Improvement Company, which in turn acquired the assets of the old company of the same name, by an exchange of stock in 1888. With the final organization of the latter company the modern public utility holding company was under way. This company then entered the electrical public utility field.- - - -

"Another early holding company organized by investment banking interests was the North American Company, incorporated in 1890.- - - - The tendency during the end of the nineteenth century was to grant these holding companies the right to control and operate electric, gas and other utilities. Other companies were chartered including the American Gas Company of Philadelphia in 1892 and the Light Heat and Power Corporation of Boston in 1897.- - - -

c) The Third Type

"The so called service or management type of holding company entered the electrical field soon after the other two types

already discussed. "The first of the service organizations in the electric power and light field was that of Stone and Webster. The firm began as designing engineers in 1889 but soon found it was necessary to enter the construction field. This was followed by the development of a supervisory and management organization, and a financial advisory service. Stone and Webster did not until recently make use of the holding company as a financial device to control their holdings.

11.

Among other important organizations which are known as finance or service companies controlling a large number of public utility properties are: H. M. Byllsby and Co; Hodenpyl-Hardy and Co; H. L. Doherty, W. S. Barstow Management Association, J. G. White and Company, A. E. Fitkin and Company, and The Electric Bond & Share Co. The transition of most of these companies into holding companies has usually been much more rapid than that of the Stone and Webster Group.

d) The Fourth Type

The North American Company represents still another type of holding company. It was incorporated in 1890. Its first investments were in the field of steam railroads but as the powers given it in its charter were very broad it had no difficulty in entering the field of electric light and power companies. It has maintained a policy of purchasing large central plants serving important cities. It does not attempt to purchase many plants in the same locality and unite them by interconnections. It controls plants that are widely separated. Its main companies being located in Milwaukee, Cleveland, Saint Louis and Washington. It also owns about twenty per cent of the voting stock of Detroit Edison, about forty per cent of the common stock of the North American Light and Power Company and is the largest single stock-

holder of the Pacific Gas and Electric Company. This has grown steadily until it is now one of the ten largest holding companies in the country.

3. The Expansion of these Early Types

We have indicated how the industry received its early start. About all of the present types of holding companies had been established by 1905. These companies undoubtedly proved a great help to the industry. It is hard for us to realize the conditions surrounding the issue of securities at that time. We think in terms of present (or 1928 and 1929) stock markets and then of the importance of the electric light and power industry. It is hard for us to realize that even well managed companies found it difficult to float securities. The holding company helped them to do this. It was considered a risky business and the investors demanded unusual inducements. When the Electric Bond and Share Company was organized in 1907, its common stock with a par value of over 2,000,000 was given to the purchasers of bonds and preferred stocks as a bonus.

The panic of 1907 was very serious and business was seriously depressed as a result, for several years. About this time utility commissions were established in many states and also state legislatures passed statutes governing utilities. As a result the trend toward mergers slowed up considerably for a few years.

4. A Later Type of Holding Company

In 1901 the American Light and Traction Company was incorporated. It was the first of those holding companies to unite inter-urban systems. It did not grow very much during the next decade for reasons mentioned in the last section but after 1910 it grew much more rapidly. In fact, since 1910 this type of holding company has been the most active in the consolidation movement.

... of the Pacific and Atlantic Oceans. ...
... is one of the largest ...
... in the country.

2. The Development of the Electric Industry

As has been indicated, the electric industry has developed rapidly since 1900. About all of the present types of electric machinery have been established by 1900. These conditions naturally created a great impetus to the industry. It is hard to see how the electric conditions surrounding the issue of electricity at that time, in view of the progress of progress for 1900 and 1901, could have been other than of the importance of the electric light and power industry. It is hard for us to realize that even well equipped companies found it difficult to find electricians. The number of companies helped thus to 24,000. It was considered a risky business and the investors demanded unusual inducements. When the electric bond and share company was organized in 1907, the company which with a par value of over \$1,000,000 was given to the shareholders of bonds and preferred stock as a bonus.

The period of 1907 was very serious and turbulent and seriously appeared as a result. The several years, 1907-1910, this utility commissions were established in many states and also state legislatures passed statutes governing utilities. As a result the trend toward corporate control was definitely for a few years.

3. A Later Type of Electric Company

In 1901 the American Electric and Power Company was incorporated. It was the first of those public utilities to be organized in this type. It did not grow very much during the next decade for reasons mentioned in the last chapter but after 1910 it grew much more rapidly. In fact, since 1910 this type of utility company has been the most active in the consolidated movement.

In a good many cases these companies have been brought together through the use of leases as well as by stock controls. These companies have also united under the same management widely scattered properties in different sections of the country. The American Light and Traction controls plants in Texas, Wisconsin, Alabama, Michigan etc. The General Gas and Electric Company which was organized in 1912 and which is now a subsidiary of the Associated Gas and Electric System, is another example of this type. It controls companies in Vermont, Ohio, New Jersey, New York and Pennsylvania.

The Middle West Utilities organized in 1910 is still another example of this type that began in this early period. In 1919 the Public Service Corporation was organized and the Lehigh Power Securities Corporation was granted a charter. These also belong in this class. In fact all the companies organized since the war, except where they have merely taken over existing holding companies, have of necessity been of this type. In 1910, in Lake County Illinois we had one of the first experiments with interconnections as we think of them today. Since that time under the leadership of the holding company we have seen interconnections carried out in a broader and more efficient scale. In 1910 only two of the seven public utilities whose stocks were traded on in the New York Stock Exchange, were holding companies. These two were the North American Company and the Philadelphia Company. The tendency from that time on has been toward larger and more numerous holding companies but not too large operating companies, for the latter are not efficient after they reach a certain definite limit.

The number of commercial systems increased fifteen percent in number from 1912 to 1917. However the large groups dominated by the holding companies made the best showing. They

In a good many cases the companies have been organized
together through the use of business as well as the
fact that companies have also helped to help the other companies
located properties in different parts of the country. The
national light and power companies in Texas, Oklahoma,
Alabama, Michigan etc. The General Gas and Electric Company
was organized in 1911 and which is now a subsidiary of the
United Gas and Electric Company, the company owning the
it controls companies in Vermont, New York, New Jersey, New
Hampshire.

The United Gas and Electric Company in 1911 in order
another example of this type of business is the United
Gas and Electric Company in the United States and the United
Power and Light Company in the United States. These
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County Illinois we had one of the first companies of this
companies as we think of it today. When that time came the
leadership of the United Gas and Electric Company in
created one in a broader and more extensive way. In 1911
out of the seven United Gas and Electric Company were created
the New York Gas and Electric Company, the United Gas and
Electric Company, the United Gas and Electric Company, the
United Gas and Electric Company and the United Gas and Electric
Company. From that time on the United Gas and Electric
companies holding companies and the United Gas and Electric
for the latter are not entitled to any more a subsidiary
with itself.

The number of companies organized through this
kind of business from 1911 to 1917. However the large
companies in the United States made the last company.

carried on a high type of research and succeeded in lowering costs of generation in many ways and in furthering expansion.

During the period from 1912 until 1922 they succeeded in reducing the amount of coal needed to generate one K.W.H. of electricity from 4.5 cents to 2.5 in 1922. During this period the investment in the industry increased from \$2,000,000,000 to \$4,600,000,000 - and it seems that it was wisely invested both from the standpoint of the owner of the company and also from the rate payers viewpoint. If we take the total gross revenues of the industry in 1922 we find that they are equivalent to 22% of the total capital invested compared to 16% in 1912. Rates were constantly reduced. During this period we have shown how the capital investment of the industry had more than doubled. The demand for funds had been tremendous and had been needed not only for expansion but also for meeting public demands such as requirements that cables be placed underground in the cities.

5. Customer Ownership

We have indicated that the holding company was very important in the public utility field up to this time. However we must realize that there were still many independent companies at this time. It was partly due to the practices of some of these companies that we find the yield of public utility securities rising from 1912 to 1920. Many of the local utilities were managed by local men who had little or no actual experience in engineering or public utility management. They did not have the breadth of vision necessary for their position. At the task of boring the reader I will repeat that the need for new capital to provide for expansion is one of the watchwords of the public utility industry. As the community grows, physically, industrially and socially so much the public utility company grew with it. In fact it must grow ahead of it. The management of the utility must plan years

ahead. Even this is familiar to the layman today. He has heard many times how the American Telephone and Telegraph Company estimates the population of a community years in advance in order to provide for it. He realizes that all utility enterprises must do likewise. Unfortunately many of the early utility managements did not seem to be aware of this basic fact. They made no preparations for such expansion. In fact they issued, as previously indicated, mortgages with provisions that made future financing not only difficult but in many cases practically impossible.

During this period utility regulation was unduly rigid and operating companies were held to a low rate of return. As the World War progressed prices rose and the expenses of the utilities rose correspondingly but as their income was fixed and not readily adjustable their profits decreased. Naturally the credit rating of the industry was effected. At the same time all private loans were in competition with Government Loans and they suffered accordingly, i.e. the cost of capital to the industry increased. Besides the safety feature inherent in Government Bonds another inducement was made to large investors, to have them purchase United States Government Bonds these were made tax exempt. At the present time we can see the effect of our Government flooding the market with its securities. Other types of securities drop in price as they come in competition with those of the Federal Government and if the market for loans is not large enough to absorb all those which private business wishes to float there can only be one result. Only the highest type will be accepted and those will be floated at a discount. During the period from 1918 to 1921 practically all types of securities except tax exempt investments showed a decrease in the amount offered for sale. The utility forced to secure a certain minimum of funds had to pay a high rate for its money. Our politicians at Washington should re-

view history a little and then perhaps we would have a balanced budget a little sooner; which would reduce the amount of government securities that would need to be issued.

Although the sale of securities to customers of the utility had been considered prior to 1914 as a means of creating favorable local opinion this idea was not followed up to any great degree in the early days of the industry. "With the passage of time increasing stability of public utilities, local purchasers of their securities become more common but no extensive efforts were made to secure local ownership until 1919, although the movement was begun in a small way five years earlier by certain western companies, particularly the Pacific Gas and Electric Company.

"The so-called customer ownership movement then inaugurated has since attracted wide attention. There were two fundamental reasons for this movement: (1) The difficulty of securing capital from large investors on account of high income taxes and the war and post-war exceptional demands for capital; and (2) a feeling on the part of the utilities that local ownership would bring about improved public relations and greater cooperation between utilities and their patrons.

The following chart will give some idea of the growth of sales direct to customers.

Year	Sales by Investment Houses	Sales Direct to Consumers	Total Security Sales
1920	\$ 326,374,000	43,000,000	369,374,000
1	458,917,000	86,000,000	578,917,000
2	589,961,000	130,000,000	719,961,000
3	747,722,000	175,000,000	922,723,000
4	982,421,000	254,000,000	1,236,421,000
5	982,223,000	297,561,000	1,279,784,000
6	1,150,965,000	236,557,000	1,387,522,000
7	1,888,909,000	263,527,000	2,152,436,000
8	1,471,497,000	181,682,000	1,653,179,000
9	1,328,709,000	153,436,000	1,482,145,000
30	1,452,854,000	135,000,000	1,587,853,841

"The activities of certain large companies in this field

view history a little and then perhaps an article here or there
 budget a little more; this would reduce the amount of expenditure
 restricted that would need to be looked.

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 the war and post-war exceptional demands for capital; and (2) a
 feeling on the part of the utilities that local ownership would
 bring about improved public relations and greater cooperation in
 local utilities and public service.

The following table shows the sales of the utilities
 of sales direct to customers.

Year	Sales of Investment Service	Sales Direct to Customers	Total Sales
1900	\$ 230,000	\$ 230,000	\$ 460,000
1	230,000	230,000	460,000
2	230,000	230,000	460,000
3	230,000	230,000	460,000
4	230,000	230,000	460,000
5	230,000	230,000	460,000
6	230,000	230,000	460,000
7	230,000	230,000	460,000
8	230,000	230,000	460,000
9	230,000	230,000	460,000
10	230,000	230,000	460,000

The activities of certain large companies in this field

may be of interest. In 1917, before the customer-ownership movement was undertaken, the Commonwealth Edison Company of Chicago had 7,000 stockholders. In August, 1924, it had about 43,000 stockholders in addition to about 4000 employees who were purchasing stock on the partial payment plan. During the same period the Public Service Company of Northern Illinois, increased its stockholders from about 2,750 to 26,000.- - -

"The Customer Ownership Committee of the National Electric Light Association, which has actively assisted in this movement, reported in 1924 that not less than 185 light and power companies were selling junior securities to their customers, these companies serving forty-five percent of the population of the United States and having sixty-five percent of the entire revenues of the light and power industry.- - -

"Many of the early sales of securities were in the form of notes or other obligations. The success of these sales led to the substitution of preferred stock, and more recently to the general offering of common stock. It has been pointed out that the sale of junior issues to customers should not be undertaken without careful consideration of the obligations assumed and the risks involved. A large proportion of the customer purchasers are not experienced investors and would be seriously disturbed by curtailment or suspension of dividends. The resentment which might follow might more than offset the improvement in public relations which had developed from the cooperative relations previously established.--

"Local ownership, however, tends to strengthen the financial position of the utilities and to lessen the risks of undue curtailment of revenues by municipal or other regulatory authorities. Customer ownership of public utility securities has the further advantage of offering a continuous opportunity for added investment because of the steady growth of the properties and their

constant need of capital additions. Such investments are of advantage to the customer in that he can see the property in which he has ownership and take pride in its success. He in turn may be helpful through criticisms or comments on the operations of the property.

"Customer ownership sales have been conducted by the companies themselves with the assistance of their employees, who have been paid commissions for their work, carried on in connection with their regular duties. The commissions and other expenses of the sales have amounted on the average to somewhat less than the fees usually paid to investment bankers."¹.

I think that in his last statement Mr. L. R. Nash is not correct in saying that it costs the company less to sell to customers than to sell an entire issue to investment bankers. In the Electrical World for September 24, 1921 on page 638 it gave the summary of the costs of selling preferred stock to customers. The mean average costs for six typical companies was \$6.70 for each share sold, the average selling price of these shares being \$89; and this is more than it would cost to sell the stock through the regular investment channels. Nash seems to feel that the operating companies handle these sales entirely by themselves. However in about all cases the holding company controlling them or investment bankers closely connected with their companies arrange the campaign and receive a stated sum for their services. These latter charges do not seem to be included in the above figures taken from the electrical world. The Electric Bond and Share Company charges its subsidiaries \$1.25 per share for the first 20,000 shares sold in such campaigns which they supervise. This is of course in addition to the regular annual charges which the subsidiary pays to the Electric Bond and Share Company for its financing services. Mr. H.

1. "Economics of Public Utilities" by L.P. Nash P. 363

B. Dorau in his text "Materials for the Study of Public Utility Economics" says, "There is no immediate financial benefit to the companies in disposing of this preferred stock in this way."

We have seen the different conditions that led to the rise of the customer ownership campaigns. The chart which appears above shows that the amount of securities sold directly to consumers made up about twelve percent of the total security sales in 1920. It became a large percentage of the total in each of the following years until it made up about twenty-five per cent in 1925. This was the peak year for sales of securities to consumers both relatively and absolutely. From that time on the forces which made the sale of common stock more profitable, caused the sales directly to consumers to fall off steadily until we find that in 1930 they accounted for only about eight percent of the total security sales of the electric light and power industry.

We have seen how the utilities obtained a good deal of capital through their customer ownership campaigns, particularly after the world war. The holding companies usually planned these campaigns and received service fees for so doing. In this section I am going to show how investment banking interests became dominant in the field of holding companies and how they emphasized the sale of common stocks in accordance with the wishes of the public for this type of security, especially after 1924. In fact if it had not been for their ability to sell common stocks we would not have had the multiplication of holding companies that we had during the last decade.

6. The Banking Firms in the Field

During and after the World War the dominance of the public utility holding companies by banking groups became the most important factor in the growth of the industry. Those banking

houses usually give the following reasons for their entry into the public utility field. The banker who regularly handles the issues of a corporation becomes familiar with the business of the company, with its needs and with its difficulties and is therefore able to offer advice as to the financial needs, and policies and operations of the company. They decided that they could do this best if they had control of the companies and so we find the bankers dominating so many of our holding companies. At least that is the reason that they give. Here we find such houses as J. P. Morgan and Company whose chief business is the sale of securities to investors, tied up directly with a public utility group. We find for example that the United Corporation was sponsored by the Morgan, Banbright, and Drexel group to "unite the companies along the Atlantic Seaboard in a community of interest."

7. Factors Affecting the Type of Security Issued by the Holding Co.

Three distinct considerations face the bankers and the corporation in deciding as to the means of raising the capital. As the bankers are much nearer to the financial market than are the operating companies they say that through the use of the holding company they can secure capital cheaper than the operating companies are able to.

a) The Purpose for Which Securities are to be Issued

This would according to theory and text books appear to be the major consideration. However it is probably the least important of the three major considerations. It is important in some ways. For example we find that as a general rule stock issues are more significant in the raising of new capital than they are in re-funding operations.

b) The Existing Financial Structure of the Corporation

This is always important as the public utility should, and most of them do, try to maintain a so-called balanced financial

structure of from fifty to sixty percent bonded indebtedness, of from twenty-five to thirty percent common stock with the remaining capital consisting of preferred stock. This is considered to be a long term trend and the company tries to maintain such a relationship over a period of time. However, it may, because of other circumstances particularly those treated in the next section, be forced to issue a type of security which will upset the balance of the capital structure for the time being. In this case the corporation will usually attempt to adjust this when conditions are altered and are more favorable to the type of financing which the company feels will give it a more equivalence in its capital structure. If we look back to the early days of the industry we find many companies having a bonded indebtedness consisting of much more than sixty percent of its capital. This of course was an unhealthy condition for any company.

c) The Financial Condition of the Money Market

In other words this may be called the public attitude toward the relative desirability of different classes of securities at any given time. Up to twelve years ago this was probably not an important a factor. However I will attempt to point out how, during the last decade, it has come to be the most important force with which the investment banker must cope. He must not buck against it although he may sometimes modify it.

8. The Expansion of the Holding Company from 1920-1930

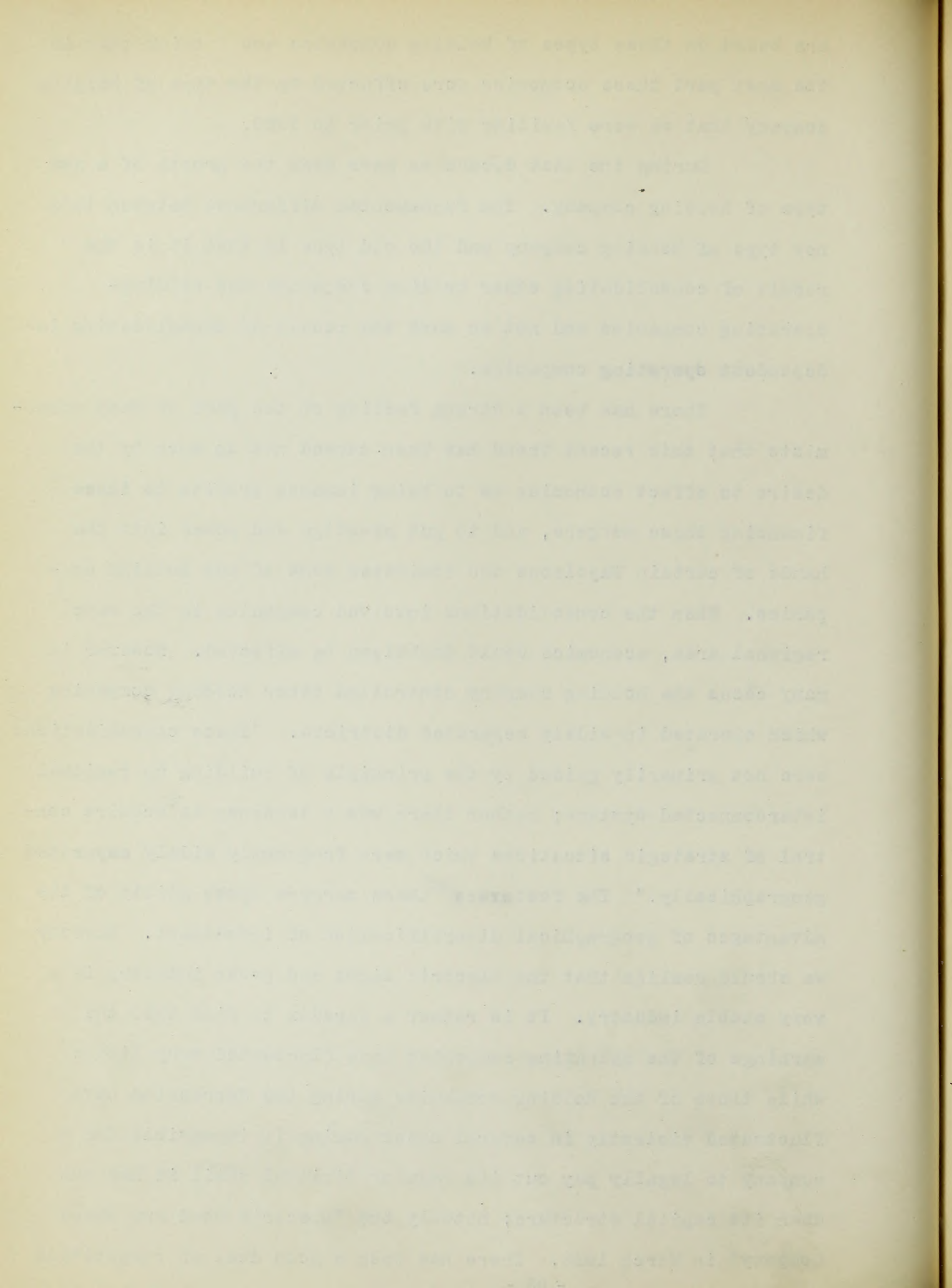
a) Introduction

As we traced the rise of the holding company up to 1920 we found that it was practically always formed by uniting under central control, several operating companies. As the industry grew the size of the units grew but the nature of the components of the consolidations remained the same. Practically all the economics which we are told result from holding company control

are based on these types of holding companies and I think that in the most part these economies were effected by the type of holding company that we were familiar with prior to 1920.

During the last decade we have seen the growth of a new type of holding company. The fundamental difference between this new type of holding company and the old type is that it is the result of consolidating other holding companies and holding-operating companies and not so much the result of consolidating independent operating companies.

There has been a strong feeling on the part of many economists that this recent trend has been caused not so much by the desire to effect economies as to being immense profits to those financing these mergers, and to put prestige and power into the hands of certain Napoleons who dominated some of the holding companies. When the consolidations involved companies in the same regional area, economics could doubtless be affected. However in many cases the holding company controlled other holding companies which operated in widely separated districts. "These consolidations were not primarily guided by the principle of building up regional interconnected systems; rather there was a tendency to acquire control of strategic situations which were frequently widely separated geographically." The fosterers^{of} these mergers spoke glibly of the advantages of geographical diversification of investment. However we should realize that the electric light and power industry is a very stable industry. It is rather a paradox to find that the earnings of the operating companies have fluctuated very little while those of the holding companies during the depression have fluctuated violently in several cases making it impossible for a company to legally pay out its regular dividend until it had cut down its capital structure; notably the "Electric Bond and Share Company" in March 1932. There had been a good deal of competition

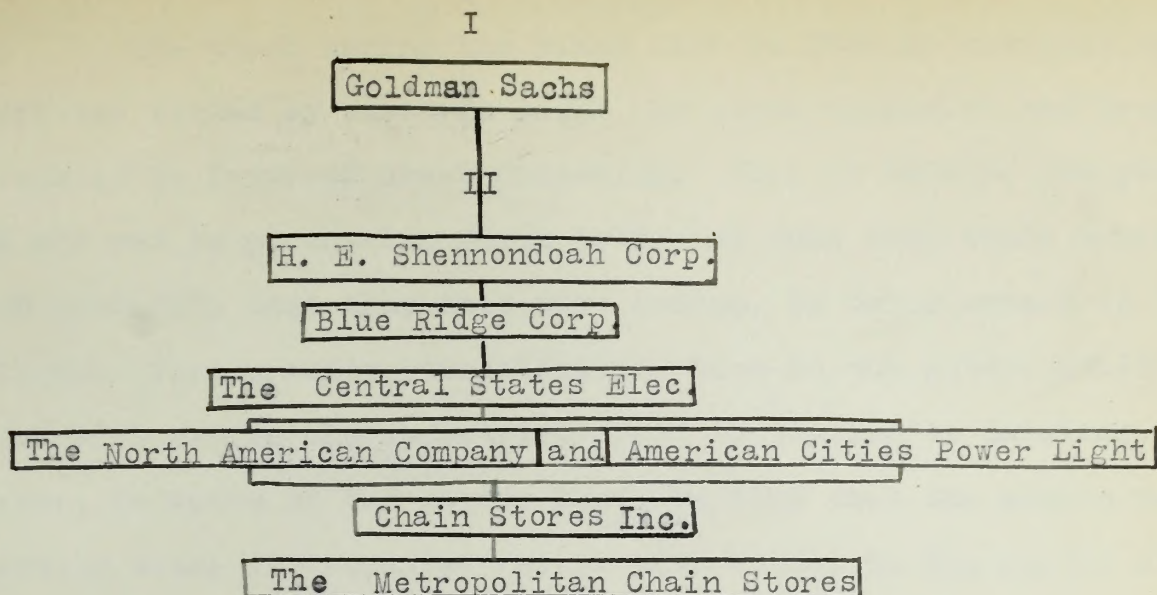


among the holding companies and during this period fantastic prices were paid subsidiaries.

The trend led to the pyramiding of one holding company on another until we reached as Ripley says, the magic number seven. Now we are probably willing to admit that certain tangible economies can be effected by the first holding company that directly controls operating companies, however as to the value of the succeeding companies there seems to be much doubt.

Mr. John Flynn spoke of this in an address given before the American Academy of Political and Social Science on November 6, 1931. "The intermediate holding company serves no good purpose. If a holding company is necessary for uniting in the interest of operating economy, widely scattered plant units, what purpose is served by the second, third and fourth company which is piled on top of the first holding company. These simply have been used as a device ^{for} milking the investor and the taxpayer alike."

When the securities of the holding company are being sold to the investor he is told of the greatness of the electric light and power industry, of its stability and past record, and in addition he is told of the advantages secured by holding company control. He is not told that the holding company whose securities he is purchasing and is perhaps seven corporations removed from any connection with electric light and power operating companies, or perhaps what is worse, that the holding company also invests in the stocks of companies that are not public utilities at all. Mr. Flynn gave an example of this which should be apparent from the diagram below.



"Each one of these holding corporations does nothing useful but subtracts its expenses and profits from the one below it and passes the remainder to the one above it." - - - Some intermediate holding companies such as the Western Electric Company easily justify their existence but what can be said of the maze of utility holding corporations which like the lilies of the field mentioned in the Gospel, toil not neither do they spin.- - - In most cases all but the first holding company should be eliminated. "He then criticized the corporation laws which are antiquated and "which permit citizens to call into being fictitious persons which is bad enough but which go even farther by allowing these latter to continue the process ad infinitum which is infinitely worse".

We find that at different periods the public favors debt, financing and at other times it favors stock financing. The utilities must go with the trend and secure its funds by selling to the public the type of security which it demands at that particular time. The issue of notes and debentures is with few exceptions occasional by the need for capital during a transitional period existing between the three distinct periods noted in the first of this paragraph. A bond issue may mature at a time when interest are high and the corporation therefore wishes to borrow short term money to tide it over such a period until rates are lower.

1. The first step is to identify the problem.

2. The second step is to define the objectives.

3. The third step is to develop a plan.

4. The fourth step is to implement the plan.

5. The fifth step is to evaluate the results.

6. The sixth step is to report the findings.

7. The seventh step is to draw conclusions.

"Each one of these steps is essential in the process of problem solving. The first step is to identify the problem. This is often the most difficult step because it requires a clear understanding of the situation. The second step is to define the objectives. This involves determining what you want to achieve. The third step is to develop a plan. This is where you decide on the best way to achieve your objectives. The fourth step is to implement the plan. This is where you put your plan into action. The fifth step is to evaluate the results. This involves checking to see if you have achieved your objectives. The sixth step is to report the findings. This is where you share your results with others. The seventh step is to draw conclusions. This is where you decide what you have learned from the experience and what you can do to improve in the future.

The trend during the years 1920 to 1930 in the type of securities issued by electric light and power companies has been distinctly in favor of stock financing. This is because the public mind was set in purchasing stock believing that they would share in "huge profits", that they felt were coming, by being owners in the business. They greatly overestimated these in the public utility field which unlike the industrial field is limited to earnings. However, in spite of the latter fact, we find that the public were demanding stock in companies rather than bonds, in the public utility as well as in the industrial fields. Stock prices were soaring and the desire to possess stock became a mania in the minds of the American people. Naturally as the demand grew, we find the prices rising and therefore it would have been foolish for the electric power and light companies not to take advantage of this opportunity to secure funds easily and at cheaper rates than they could finance through bond issues. Just how the corporations took advantage of the situation is shown by the following comparisons.

During the last decade there was a noticeable variation in the methods and types of financing of a supposedly staple industry. During some years we find that stock financing constituted less than 8 per cent of the total value and other years when it accounted for as much as 60 per cent of the total (later in the first nine months 1929). At the beginning of the period, 1920, we find that short term financing was responsible for 55 per cent of the total while in the year 1929 it made up less than 3.5 per cent of the total. Also long term financing was strikingly in evidence in 1919 making up 38 per cent of the total and even more important in 1923 when it reached the heights, accounting for 92 per cent of all the financing for that year. Let us pause for a moment and look back over these illuminating figures. What is the reason for these reversals in trends? Was it because during some years com-

panies needed new capital and during others they were refunding? I think not. Why did bond financing assume the imposing position it did in 1923? It was because we were entering a period of recovery, we had just seen a period of depression when profits were scant and the public was looking for safety in placing its funds. The demand was for bonds and the electric light and power companies felt the pulse of the investing public, and, reading it correctly, they financed through bonds. Short term financing was important during 1919 because interest rates were exorbitant and although short term financing is looked upon unfavorably by these corporations they are at times forced into it by the pressure of the public demand. They simply tried to tide over an unfavorable period to a better one when rates would be lower. Also the scanty profits shown by corporations in the years directly prior to 1920 coupled with the unfavorable financial market conditions had also made it increasingly difficult to sell stock to the investors by means of the regular investment channels.

As corporations profits showed increases from year to year after 1922 reflecting the more favorable business conditions we find that investors became again interested in the possibilities of stocks. During the period 1921 to 1926 short term financing dropped from 50 per cent to 10 per cent of the total volume of financing in the electric light and power field. This trend was offset by the amount of stock financing which trippled during the period in volume and by a proportionate increase in the amount of debt, long term financing.

From 1927 up to the third quarter of 1929 we find the proportionate amount of stock financing increasing, in accordance with the greater demand of the investors for this type of security. They were just like sheep following a few leaders and like hogs in that it seemed possible to cram practically unlimited amounts of

stock down their throats, without much regard either to its price, its value, its earning power, or its conservatively estimated future possibilities. When they did try to estimate the future of the electric power and light industry as shown by the increasing prices they paid for stock of companies in this field they certainly grossly overestimated them. They could see nothing but increasing profits ahead. Stock financing had made up 27 per cent of the total, as an average from 1919 to 1927 but in the period 1927 to 1929 it averaged 40 per cent of the total.

The volume grew as does a snowball pushed by a small boy and reached a climax in the third quarter of 1929, when stock financing made up 80 per cent of the total.

During this same latter period 1927 to 1929 we naturally find that debt financing decreased in amount proportionate to the increased volume of stock financing. As the demand for bonds fell the yields naturally rose, continually up through the third quarter of 1929 when they averaged about 5.83 per cent. They did not go higher because the supply was not large. The simple average yield on operating companies bonds did decline slightly from the second to the third quarter. All during the last few years it has been evident that investors are recognizing the slightly greater risks of holding company bonds compared to those of prime operating companies, the latter being much nearer to the property and usually being secured by direct mortgages on secured property while the former might be merely collateral trust bonds secured only by the stocks of the operating companies. For the last few years bonds of operating companies have sold at a yield almost 1.03 per cent below those of holding companies of the highest grade. The greatest drop in the proportionate amount of debt to total financing of course occurred from the first to the third quarter of 1929 when stock financing was balancing - this trend by a corresponding increase in

The volume of the work is not large, but it is a valuable contribution to the literature of the subject. It is a well-written, concise, and authoritative work, and it is a must-read for all those who are interested in the subject.

volume. In fact we find that the volume of long term financing in the third quarter was less than 60 per cent of that for the first quarter of this year. The greatest drop occurring in the holding company group.

We will now show that without any doubt all during this last decade the popular demand was by far the most important consideration influencing the type of securities issued. Stock financing showed an increase in the volume of both new and refunding issues, although for the most part it was of relatively greater importance in the raising of new capital than in refunding issues. During the year 1919 14 per cent of the amount of capital raised by stock issues was for new capital while in 1929 the amount for this purpose made up over 67 per cent of the total. It had not become of any great importance in this respect until 1922 when it accounted for 40 per cent of the total volume.

The demand for stocks increasing, the percentage of stock issues to the total increased to 50 per cent in 1927 and to 67 per cent in 1929. Short term financing is usually more important in raising funds for refunding capital than in getting new capital for it is only resorted to when absolutely necessary as when an issue comes due during a period of high interest rates. If they do need new capital at such a time they try to manage to get along without it until conditions in the money market improve. During the years 1919 and 1920 we find that of the long term debt issues put out, the majority were for the purpose of raising new capital. During the next period from 1921 to 1926 this tendency was reversed for 80 per cent of the amount raised for refunding purposes and 60 per cent of that obtained from new capital requirements was gotten by long term debt financing.

b) Merger Movement During the Last Decade

In the preceding section we have shown how stock financing

[illegible]

was easy due in a large measure to the demand of the public for stocks as investments. I am going to show in this section the great number of mergers that took place during the years from 1920 to 1928 which would not have been possible unless funds could have been obtained by holding companies with which to consummate these consolidations.

I Introduction

"During the early part of the decade from 1919 to 1928 although there were few actual acquisitions there were a number of interconnections formed whereby neighboring companies pooled their facilities.

- - - - Such interconnections were real service economies and were certainly justified. But the movement toward centralization began in the last half of 1921. Except for a slight setback in the last quarter of 1924, which lasted into 1925, the tendency continued at an increasing rate. In 1926 the astounding number of 1,029 concerns merged or were acquired by other companies. In the third quarter of 1927, the activity subsided somewhat, possibly from fear of the threatening investigation by the Government, which is now going on, and also from the increasing scarcity of raw material to be acquired or with which one could merge." * The results of the investigation made by the committee on Unemployment were briefly summarized in the following table.

* "Recent Economic Changes" Presidents Committee on Unemployment
P. 187

Mergers and Acquisitions in the Field of Public Utilities 1919-1928

Quarter	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Number of Companies Disappearing *										
First	3	1	11	27	118	171	70	325	214	245
Second	8	8	9	47	76	139	94	261	308	189
Third	9	5	29	86	121	157	112	253	153	151
Fourth	2	1	25	125	106	108	99	186	221	
Total	22	15	74	285	426	580	402		911	

I have taken some additional information from Exhibits 744, 745, 746 and 4168 of the "Federal Trade Commissions Investigation of Holding Companies", relative to the mergers during the years 1925 through 1928.

The centralized management, power pooling interconnection, and coordinated development of power resources received much attention during the year 1925. This is reflected by the fact that 407 companies were acquired by 153 others. The greater importance of these mergers is brought out by the fact that the capitalization of the 407 acquired companies totaled approximately \$1,957,263,000 or about one quarter of the aggregate capitalization of the electric light and power industry. Due to the fact that some of these companies were involved in two or more mergers during the year, the capitalization, cannot be taken as the net capitalization of the 407 companies.

The capital involved in some of the mergers brings out the great stride made in centralized management during the year. One merger involved acquired properties and an administration company with a total capitalization of more than \$208,000,000 and in three others the capitalization of the absorbed companies totaled between \$125,000,000 and \$175,000,000. The following table gives the size of the concerns, as afforded by the record of about three

*No later report available

fourths of the companies involved in these mergers in 1925.

Under \$10,000	22
\$10,000 to \$50,000	72
\$50,000 to \$100,000	34
\$100,000 to \$250,000	40
\$250,000 to \$500,000	22
\$500,000 to \$1,000,000	18
\$1,000,000 to \$2,000,000	21
\$2,000,000 to \$5,000,000	19
\$5,000,000 to \$10,000,000	13
\$10,000,000 to \$20,000,000	15
\$20,000,000 to \$50,000,000	18
\$50,000,000 to \$100,000,000	8
Over \$100,000,000	4

The companies acquired were not confined to any one section of the nation and in many instances the acquired companies operated in several States and even in widely separated sections of the Country.

II The Year 1926

The year 1926 holds the record for the number of mergers. It was a year of especially great activity in the South, Southwest and Middle West. A large number, 201, municipal systems were purchased and merged into coordinated systems. Management problems are large in connection with the syndicates and large operating groups. In finance, engineering, accounting and sales there have been many problems of organization to solve. It is especially noticeable at this time that in most respects the policy of direct responsibility and the decentralization of authority have been found best. We have noted in the preceding section that there is a very definite optimism of size for operating company groups, and that beyond this point inefficiencies creep in. Does this trend to-

ward decentralized authority noticeable in 1926 not indicate that there is undoubtedly an optimism size of the holding company groups at least is the best interests of the electric light and power company and its consumers are to be considered? What is the good of the second third and fourth holding companies?

III The Year 1927

During 1927 a total of 911 utility changes occurred, involving direct mergers, change in ownership or change in name and corporate structure. A total of 171 plants was included and these plants were absorbed into large privately owned utilities. States in which municipal plants were taken over to the greatest extent were Georgia, Nebraska, North Carolina and Oklahoma. States in which changes in corporate structures of private plants were carried out to the greatest extent were Massachusetts, New York, North Dakota, Texas, Illinois and Pennsylvania.

There was great activity in the purchase of small private plants in New England, along the Atlantic seaboard, and in the Middle West states the Southeastern Power and Light Company, Middle West Utilities Company, Massachusetts Utilities Investment Trust, Mohawk Hudson Power Corporation and Ottu Tail Power Company, the Electric Bond and Share Company and the United Gas Improvement Company. Fifty four of the mergers were mergers of or transactions involving two or more holding companies.

IV The Year 1928

During 1928 the greater part of the activity in utility properties came about through shifting ownerships of properties already held by some of the larger holding companies. Only in the Mississippi was there great activity in the purchase of small properties in order to consolidate them into a transmission system. Even in the South there was a letup in the purchase of properties in order to consolidate those already purchased. In no part of the

country were there any longer any large properties available that could be consolidated into one of the large holding companies.

The activities of Consolidated Gas Company of New York, the Middle West Utilities and the Formation of the Allied Power and Light Corporation were the most important factors in the merger movement during this year. After this year the movement greatly subsided and of course after the crash in the stock market in 1929 funds could not be obtained by selling stock for these or any other purposes.

V) The Year 1929

During the year 1929 the holding companies continued to secure a large amount of funds from stock financing. In fact the electric light and power industry sold 505,803,262 of common stock and for the first time in the history of the industry stock financing exceeded in amount the bond and preferred stock financing taken together. Some of the holding companies seem to secure capital in this period just for the thrill for after they received it they didn't use it all in their business. As a case in point I will cite from the Federal Trade Commissions Reports of Holding Companies, Exhibit No. 4596, Income from interest earned, of Electric Bond and Share Securities Corp., was only a minor item until 1928, when it increased to \$2,218,376.19. This tremendous increase is largely due to the placing of a large amount of call loans, the cash for such loans having been obtained in - (the early part of 1928) through the sale of additional common stock. The following table shows the sources of interest income during the year 1928:

Interest earned in bank balance	41,084.70
Interest earned on notes and loans receivable	556,482.07
Interest earned on call loans	1,620,807.10

This simply means that this company had sold stocks to the public telling them that the money obtained would be used to expand operating companies in the industry, but actually the funds

were put out on call to aid speculation on the New York Stock Exchange. When companies can secure funds so easily it is a bad thing for the industry, and yet this state of affairs carried through until the stock market crash in 1929.

VI) The Last Quarter of 1929 until 1932

The last quarter of 1929 saw a complete right about face in the methods of financing. This was due to the public reaction to the stock debacle. Public utility financing dropped off much more quickly than did that of the other important industries. While from 1922 to 1929 it had made up on the average, forty per cent of the total volume of financing, in the month of November 1929, public utility financing accounted for less than seven and one half per cent of the total. This was due principally to the fact that the industry was not forced to finance at such a time because it had on hand an abundance of funds secured by previous financing. In addition general conditions for expansion, construction were unfavorable at that time. It is of interest to note that there were practically no refunding issues offered by the public utilities in the third and fourth quarter of 1929.

This period proved to be merely a transitional one. After years of stock financing which had been increasing in relative and absolute amount, we find the electric light and power industry definitely committed to a complete reversal in the methods of financing. The year 1930 was noticeable because of the relative importance of long term bond issues. It remains to be seen if holding companies can expand in a market that will undoubtedly favor senior financing for several years to come. I have indicated that practically the only bonds a holding company can issue are collateral trust and debenture bonds. With the public still feeling the affect of the tremendous jolt it received in 1929, it seems doubtful if such securities will be attractive to them. When they

buy bonds they will want bonds that are secured by a lien on property not by a lien on the common stocks of another corporation.

Some of the large holding companies have been doing good work during the last few years in attempting to simplify their capital structures and of their subsidiaries. The Pennsylvania Power Corporation in 1930, reorganized their financial structure by clearing away practically all of the many underlying issues and substituting for it a large \$100,000,000 issue. This tendency continued in 1931 as shown by the records of the Consolidated Gas Company of New York which floated a \$57,000,000 issue for essentially these same purposes.

The following table gives a comparison between 1929 and 1930:

	<u>1929</u>	<u>1930</u>
Mortgage Bonds	215,882,500	477,320,000
Debentures	292,200,000	377,615,000
Notes	15,325,000	259,700,000
Preferred Stock	286,248,000	179,159,000
Common Stock	505,803,000	159,058,807

Many of the large holding companies have been rather hard pressed in obtaining funds during the past two years. While good operating companies or holding operating companies have been able in most instances to secure funds at a cost of from four and one half to six per cent, the super holding companies farther removed from the operating companies have had to pay eight per cent and more for funds.

The operating companies have suffered only slight declines in their income for although power sales have dropped off they have greatly increased their domestic sales during the last few years. However a slight drop in the earnings of subsidiaries will greatly curtail the income of the top holding company due to the pyramiding of stock interests. With the excellent showing made by the electric power and light industry it would seem rea-

sonable to suppose that if investments in the super holding companies had been justified they too would have weathered the depression with ease.

VII) Checking Up on the Last Decade

The facts regarding the holding companies show that the investment made by the public was not wisely invested in stocks of public utility companies or else a good deal of it leaked into the hands of promoters, managers and financiers.

The following information indicates that perhaps a good deal of the investment that finally reached the operating companies, after being obtained by the holding companies during the last decade, was not judiciously expended. I have corrected the figures which appeared in the "Statistical Supplement of the Electric Light and Power Industry" for several inaccuracies. In one instance it placed the total investment of the electric light and power industry at \$11,000,000,000 when all reliable figures state it at \$12,000,000,000.*

"Sales Per Dollar on Declining"-

"In 1922, (a year of when business activity was 27 per cent below normal, and industries were just recovering from the crash of 1921) 7.54 kilowatt hours of electricity were sold to the public for each dollar invested in plant and equipment.

"In 1926 (a year when business actually was booming at 10 per cent above normal) this had dropped still further to 6.22 (corrected) per dollar of investment and to 5.82 for the twelve months ending September 30, 1931.

"In addition to this, revenues per investment dollar are declining. In 1922 the electric light and power enterprises received 21.3 cents from the consuming public for each dollar of invested in plant and equipment. In 1926 this had dropped to 18.6

*"The Electric Light and Power Industry" Statistical Bulletin No.7, National Electric Light Association" Page 3.

cents and in 1929 to 16.6 cents and to 15.7 cents for the twelve months ended September 30, 1931.

"Turnover on capital is becoming slower. In 1922 the rate of capital turnover, (that is the number of years necessary to purchase a dollar of consumer revenue for each dollar of investment) reached a low point of 4.7 years. In 1926 it rose to 5.4 year and to 5.9 years in 1929 and in the twelve months including September 30, 1931, 6.3 years.

"This is largely the result of increasing costs of facilities for reaching the consumer. The low point in the investment in plant equipment per kilowatt of generating capacity was reached about 1922 at an average of \$312 per kilowatt. Since then the rates has risen to \$354 in 1926 and \$374 in 1930. This is in part the result of the fact that the saturation of urban consumers is practically accomplished and that the future expansion of the industry must take place in the less densely settled and more remote communities where the costs of transmission and distribution are of necessity much higher per unit sold.

"The ratio of kilowatt hours generated per kilowatt of capacity must be interpreted in the light of the relative intensity of business activity. In 1922 general business was stagnant at about six per cent below normal, and if business had been normal, factory sales would have been more and the figure of generation per kilowatt would have been about 2975 kilowatt hours. In 1929 business was booming at nine per cent above normal, and if business had been normal, factory sales would have been smaller and the generation per kilowatt would have been about 2770 kilowatt hours." *

VIII Looking Ahead for a Decade

I have very decided ideas about the future expansion of the industry. The companies speak glibly of the billions needed

* "The Electric Light and Power Industry" P.31, Nat.Elec.Light Assoc.

by the industry for expansion during the next decade. I for one, before I invest any money for this expansion want to be sure that it is going to be an income producing investment. I am going to take up the possibilities for expansion separately.

A Industrial

At the present time about eighty*per cent of industry is electrified. About fifty per cent of the industrial load is supplied by central stations. Of the industries that are not electrified, a large proportion are of such a nature that they are not very likely to be electrified in the near future. The expansion of industry in general during the next decade does not look very promising. Our productive machinery appears to be much greater than we can use even in normal times. As an example we have the automobile industry with a capacity of 5,000,000. cars per year. Finally due to the increasing efficiency of the steam generator, and to the large scale of production, there is the constant threat of more companies generating their own power.

B Railroads

We have read volumes about the great market for power that the utilities will have when the railroads are electrified. We all feel that it will be a fine thing for the country when our roads are electrified. However we have to face the facts. It means scrapping millions of dollars of equipment. It means securing millions of dollars in investment. As I survey the railroads at the present time, forty-six not being able to earn their fixed charges, I cannot see the electrification of the railroads," just around the corner." The railroad picture will have to change considerably before this potential power customer becomes a reality. The railroad that owns the longest stretch of electrified line in this country, and that was the greatest exponent of electrification has been forced into bankruptcy largely because of its unwise

*"Statistical Supplement (- 99) N.E.L.A. Jan. 1931. Page 15.

investments in new equipment. Other roads will see and take heed. At least we hope so.

C The Farmer

We are told of the vast electrical market not tapped on the farm. We are shown statistics that state that only 10 per cent of the farms in the United States are as yet electrified. Does this mean that we have a high reserve remaining untapped? I think not. The cream of this market has been supplied.

The National Electric Light Association divides the farms of the nation into two divisions as follows:

Average Electrified Farm, 1930 *

	<u>KW-hrs. Sold Per customer</u>	<u>On Annual Bill</u>	<u>Revenue Per KW.hr</u>
In States West of the 100 Meridian			
(affected by irrigation pumping)	7,768	\$132,82	1.71
In States East of the 100 Meridian			
(not affected by irrigation)	740	50,91	6.88

It can be seen that even in the second case the sales per year are quite high. If we but scan the newspapers and read of the plight of the farmer, we doubt his ability to become a very lucrative electrical consumer. His lot has been going from bad to worse since 1920 and he does not seem to be a very promising prospect.

D. The Urban Consumer.

We have already mentioned that the point of saturation in regard to the number of urban consumers seems to be very nearly reached. However, it seems quite possible that the intensity of use can be increased. All the operating companies that have kept up their revenue during the last three years, have done so by increasing their domestic sales per customer. Intensive expansion such as this is lucrative in that it does not require so much increase in distribution facilities.

E. Conclusion.

Perhaps I may seem to have taken a pessimistic viewpoint in regard to expansion during the next few years. However, I think, not I feel that its expansion should be slower than it has been, or the revenue an investment will fall very low. We have seen that trend is downward. Inventory should demand tangible proof that the money they are investing is to be judiciously spent and will yield

*Statistical Bulletin No.7" Nat Elec. Light Assoc. P.5.

a suitable return.

Taking Stock of the Holding Companies

A. Some of the Most Evident Evils of the Holding Company Regime.

I have traced the growth of the holding company up to the present time. I have indicated the advantages resulting from holding company control. The fact that I want to emphasize is that all economies accruing from such control are only potential ones and that they are not the necessary result. It is possible to effect many economies through the use of the holding form of organization but it is also possible for the management to bleed the underlying companies. We have had ample evidence during the last decade, that the rise of the holding companies, especially of late years, has not been only for the purposes of securing "efficiency and economy, but also, as it appears, too often for the profit incident to the turnover."* Some indications would seem to show that certain magnates in the industry became almost possessed with the desire to build up huge systems under one man control.

1. Propaganda.

Some of the first signs that we had of the unethical type of management that we were securing in this field, were the reports of vast sums being spent in propaganda by the electric light and power companies. Thus colored information was injected into text books, printed in newspapers and given out by congressmen who had been sent to Washington with their pockets filled with gold from the coffers of the electric light and power utilities. In practically all cases we

*"Main Street and Wall Street" by W.Z. Ripley, Page 28.

find that the companies sponsoring these activities were the large holding companies aided by the National Electric Light Association. As stories of these leaked out we had agitation for our investigation of the industry. The result was the formation of a committee by the act of Congress, to investigate the holding companies. This investigation is now going on. I have before me all of the reports of committee to date and it is from these that I have selected much of the following information.

2. Propaganda in the Newspapers.

The following quotation is taken from the early exhibits of the commission. A representative of the National Electric Light Association said to an editor, "You need money and we need the approval of the press. You would like your share of the \$28,000,000 annually spent in advertising by the utilities and we can get it for you. In return for this we expect you to publish what we send to you in the way of publicity material, and to give us more editorial approval, if you can be more than neutral. If you fail to do this, it may be that you will get no advertising from our people"* Some utilities actually owned newspapers. The International Paper and Power Company owned many newspapers throughout New England but it was forced to sell holdings in these companies. The investigation

*"Holding Companies" Federal Trade Commissions Investigation for the Senate.

disclosed further that the utilities were supervising the writing of texts which they had introduced into the schools. They also gave large sums to universities to carry on research favorable to them.

3. Some Poor Management.

I want to give the following example which indicates that not only may a holding company fail to effect economies, but may actually manage some companies less efficiently than the former management has done. Electric Bond and Share was instrumental in organizing the National Securities Corporation. "The latter company was organized as the holding company for operating Companies in Idaho, the principal one of which was the Idaho Power Company. While the Idaho Power Company had shown a steady income, gross earnings increasing from in the years 1914 to 1918 from \$1,184,636 to \$1,774,364 and net operating earnings from \$446,045 to \$782,644; the National Securities Corporation had not prospered. The earnings for the twelve months ended November 30, 1918, showed a loss of 74,615. These figures included no allowance for depreciation"

4. Excess Fees Charged by Holding Co's to their Subsidiaries.

The Electric Bond and Share Company has been unwilling as yet, to submit certain of its books for scrutiny by the Commission. However I am going to quote from a few of the exhibits to show how the parent company makes tremendous profits under its service contracts with its subsidiaries. It charges them high initial rates and

then makes special charges many of which are clear profit.

"As a corporation the Electric Bond and Share Company formally executes supervision contracts with its associated holding companies and with their operating subsidiaries and assumes the actual performance of some managerial functions.--For these services it collects fees from each of the serviced companies.--Most of the subsidiary companies therefore were paying between 1.5 to 1.6% of their gross revenues as their supervisory fees. (These are not based on costs to the parent company but are made in the form of flat percentage charges)--In addition to the service fee which covers all activities in behalf of the serviced companies under this agreement which can be performed in New York City, expenses of staff members, when away from New York on behalf of the companies are to be reimbursed.--

" Fees for construction conducted under a contract with an Electric Bond and Share Company, Construction Company, such as Phoenix Utility Company, are paid to the Construction Company on the following schedule: 5 per cent on the first \$200,000 of cost of construction, 4½ per cent on the next \$800,000 of cost of construction, 4 per cent on all additional costs of construction. This fee is to cover distinctly management activities. The fee does not pay salaries or expenses of workers on the job or expenses for materials.-- There appears to be little direct occasion for expense to the Electric Bond and Share Company - under the construction

contracts, that is not directly compensated for and charged against the construction costs provided for through advances from the contractor, or included in the general or supervisory control provisions (mentioned in the begining) to be covered by that fee, other than the direction of the executive offices of the Electric Bond and Share Company, exercised through the nominal medium of the Construction Company and some account and record keeping and reporting in the New York Office.---- This construction fee is very largely a clear profit to the Electric Bond and Share Company, organization for its more or less intangible overhead relationship, in that it is a going concern with ability to furnish advice, personnel, and business contracts for the purposes of furthering construction. --- It would seem to be evident from the above analysis that the construction fees and construction supervision fees are very largely clear profit ---

"In summary, this service contract provided the serviced company, in the Electric Bond and Share Company, Group with (1) consulation, advice, and suggestions from the entire executive and technical staff on the problems of the operating companies as such may be given by mail, or to and through the sponsors; or to the visiting local executives: (2) the personal continuous oversight of one or more (18) sponsors, and (3) the performance of certain services that can be carried along at New York; (1,2, and 3 for the supervision fee of about $1\frac{1}{2}\%$ of the gross receipts), (4) the special services of any of the staff either by

prolonged study of the problem in the New York Office or by studies is the field to be compensated for at charges which are stated to be the cost including office overheads to Electric Bond and Share Company organization; and (6) marketing of securities under various plans at designated fees. That these fees and charges are one remuneration basis is indicated by the fact in procuring an income from these various services amounting to \$9,373-172.07 in 1927, the entire expenses of the parent organization were reported as \$6,613,973.47, or a profit of nearly 43 per cent. The gain in 1929 was 49 per cent. Of the \$6,613,973.47 reported as gross expenses, income taxes, discount and commissions, interest and alteration costs in addition to rental of office space otherwise provided for, would seemingly be corporate expenditure not chargeable to cost of servicing. These items amounted to \$2,050,446.43. Of the balance, i.e. 4,563,527.04, it is probable that portions of some of the classes of expense included should be allotted to corporate activities other than servicing, in connection with handling the securities invested in or traded in, funds loaned or borrowed for the company's own account, and the other corporate activities which brought an income of \$9,140,127.78 --- assuming \$4,563,527.04 represents the maximum probable cost of servicing there is indicated a gain or profit on the servicing activities for the year 1927 \$4,809,645.03 or 105.4 per cent" Bond and Share Company resold these securities to syndicates of investment brokers. Thus two sets of commissions were paid by the companies or

at least the commission paid to their parent company must have been large enough to cover a commission to it and to the investment bankers.

These charges are all made directly and indirectly to the electric light and operating companies and they therefore enter into their costs of service. The rate payer must pay for these exorbitant charges and as the information concerning them is distributed by the commission he will not be able to see much economy resulting from holding company control.

"The Electric Bond and Share Company stated that they regard the service staff as an auxiliary organization that does not directly produce more than a nominal profit and that the fees charged for the different classes of service (general supervision, engineering, construction, auditing and special) just about covered the cost of service ---

"An analysis of even the limited information available in the form of income statements, proves conclusively the fallacy of these assertions. The statements and computations which follow herein establish that a substantial profit was realized on each form of service. During the period from March 1905 when the original company was first organized until March 1929 the gross earnings from all services were \$138,680,325.14 and of these \$51,096,767.12 come from Supervision fees.*

*Federal Trade Commissions Investigation of Holding Companies

"If during 1928 the fees had been charged by the American Gas and Electric Company -- at cost of the service, they would have been 2.8 per cent of the construction expenditure to which applicable rather than 10 per cent. (This computation makes no allowance for the cost of rendering the services for Stevens and Wood Inc. If such costs were deducted the cost of engineering and supervision for subsidiaries would be less than 2.8 per cent.

"During 1927 the Appalachian Electric Power Company alone was charged \$262,126.25 more than the expenses of the engineering departments which performed the services. That is, during this year this one operating company could have taken over the entire staff of engineers and draftsmen of the holding company at a saving of \$262,126.25.*

5. Are they Public Utilities or What are They?

As the holding companies grew their financial structures became more complicated and William Z. Ripley believes that many of them were purposely made intricate. He characterizes the structure of the Associated Gas and Electric Company as a nightmare. These companies issue as many as four classes of stock, option warrants, convertible debentures and bonds. It takes more than a Philadelphia lawyer to understand such intricacies. The public is not familiar with the differences between the securities of the holding and operating companies. They are both called public utility companies. Many of the

*Federal Trade Commission's Investigation of Holding Companies

public utility holding companies control corporations engaged in other fields of endeavor than the public utility field and yet the investor is often unaware of these things. "In the year 1925 38% of the gross revenues of Cities Service come from its oil business. Is it a public utility or is it not? If it is not it has no use posing as such. If it is it has no possible right to be engaging on any such scale in one of the most speculative businesses in the United States. If it is a public utility it might do one thing, as a quasi -- investment agency it might do another. In all decency it cannot do both." The International Paper and Power Company is engaged in the electric light and power business it owns vast forest lands and paper plants and until recently it owned many newspapers in New England. It is interesting to read the powers of the corporation as expressed in the charter and by laws. The articles of incorporation of the Electric Bond and Share Corporation state some of its powers as follows:

"To underwrite acquire by purchase, subscription or otherwise, and to own^{or} hold for investment or otherwise, and to use, sell assign, transfer, mortgage, pledge, exchange, or otherwise dispose of real and personal property of every sort and description and wheresoever situated, included shares of stocks, bonds, debenture, notes, scrip, securities, evidences of indebtedness, contracts or obligations of any corporation or corporations, association or associations,

"Main St. and Wall St." P. 328 by William Z. Ripley

domestic or foreign of any firm or individual, or of the United States or of any State Territory, or dependency of the United States, or any foreign country, or any municipality or local authority within or without the United States, and also to issue in exchange thereof stocks, bonds or other securities or evidences of indebtedness of this corporation, and while the owner or holder of any such property, to receive, collect and dispose of the interest, dividends, and income on or from such property, and to possess and exercise in respect thereto all of the rights, powers and privileges of ownership, including all voting powers thereon --- To aid in any manner any corporation or association domestic or foreign, or any firm or individual any shares of stock or any bonds, debentures, notes, securities, evidences of indebtedness, contracts or obligations of which are held by or for this corporation, directly or indirectly, or in which or in the welfare of which this corporation shall have any interest, and to do any acts designed to protect, preserve, improve or enhance the value of any property at any time, held or controlled by this corporation, or in which it may be at any time interested directly or indirectly, or through other corporations or otherwise and to promote the organization and financing of subsidiary companies" and so it goes on for pages. Could any corporation be granted any further powers under the sun and yet it holds itself out as a public utility and investors took it for such. Incorporation laws are far too lenient

in allowing such broad powers.*

"Holding companies should not branch out onto other fields unless the stockholders are fully aware and consent. The Standard Company and Electric Company owning a majority of the common stock and some of the preferred, guarantees "as to principal and interest and sinking fund - \$8,300,000 worth of bonds of the Shoffer Oil Company, a complete unit in the oil industry, embracing petroleum production, transportation, refinery, and distributing, and marketing. It becomes of great interest, not only to 110,000 stockholders but to the general public in the eleven states served by the parent company as well, and yet the latter gives no information in its annual statement about this subsidiary although it does for all of its other subsidiaries **

6. Pyramiding

Pyramiding is defined as the capitalization of controlling stock interests. This means that the corporation is trading in a thin equity. The common stockholders have control but the bondholders and preferred stockholders supply most of the funds. By the process of piling one holding company on another the process is magnified. The equity securities of the underlying companies are hypothecated and collateral trust bonds are issued backed by them. The earning power of the operating companies is magnified by the large proportion of service financing, and the holding

*Federal Trade Commissions Investigation of Holding Companies

Exhibit 4534

**Main St. & Wall St. P-304

in addition to the above.

Following comments should not be made on any other

fields unless the circumstances are fairly severe and constant.

The standard of living and the standard of health are a reflection

of the country's state and one of the most important, particularly

in the industrial and agricultural fields. The standard of living

is the basis of the country's life. It is the basis of the

country's life. It is the basis of the country's life.

The standard of living is the basis of the country's life.

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The standard of living is the basis of the country's life.

All of the above is included in

Appendix

The following is a list of the countries of

controlling their interests. The list is not exhaustive.

is included in a list of the countries.

have control of the countries and are not included in the list.

usually most of the list. The list is not exhaustive.

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The list is included in the list of the countries.

1911-1912

1911-1912

company at the top receives a relatively large return on its investment. However when the revenues of the operating company shrink a little the returns of the top company are greatly reduced. -- The application of this principle of sensitive or of vanishing returns, to coin a phrase, for holding corporations is intended to be demonstrated by the following table *

1925

<u>1</u>	<u>2</u>	<u>3</u>
Per cent reduction in operating income (after taxes and depreciation but before interest necessary to wipe out all earnings of parent company applicable to dividends.	Per cent reduction necessary to wipe out all earnings of parent company applicable to dividends and interest	Per cent of depreciation for year to plant value, at end of year.
Columbia Gas and Electric -----79	88	1.13
American Tel. and Telegraph -----76	89	4.6
Detroit Edison -----64	94	3.4
Standard Gas & Electric -----56	60	.93
Public Service of N. J. -----36	54	1.8
National Public Service (1926) -----26.8	38	1.05
General Gas & Electric -----26.4	26	1.4
Cities Service -----19	26	No data
Am. Water Works -----12	17	1.4

"Heavy borrowing by holding companies is dangerous and should be prohibited. The fixed charges on account of the funded debt of the National

Public Service Corporation consumed to about 70 per cent of its earnings and as far as could be computed fuel charges consumed about 66 per cent of the earning of the Middle West utilities.* The Associated Gas and Electric Company had \$65,000,000 in bonds outstanding in 1926 and has a much larger amount now. These of course are not secured by direct liens on property and their issue does not seem to be justified in any way. Our laws should regulate the proportional amount of service securities that a holding company may issue. Most of the funds of a holding company should be obtained by the same of junior or equity securities. If the holding company does issue bonds, the investor should be fully informed of the status of such securities. He should realize that all the prior issues of the companies subsidiaries stand ahead of his bonds. In most cases the preferred stocks of these subsidiaries have a lien prior to his. The bonds issued by a true holding company, must of necessity be of the collateral trust type.

7. Overcapitalization

The juggling of the investment account of Electric Bond & Share Company has perhaps been one of the strangest features. I have previously shown that these assets were written up arbitrarily over \$4,000,000. In 1929 new stock was sold on the

*Figures from Main St. and Wall St. by William Z. Ripley.

basis of their inflated values. The common stock held by the four holding corporations supervised by Electric Bond and Share Company, i.e. American Power and Light Company, Electric Power and Light Corporation, Lehigh Power Securities Corporation, National Power and Light Company, comprise the most important of the company's domestic investments. The following table shows the cost of the investment in common stocks of these companies to the Electric Bond and Share Company. As shown in this exhibit is extremely low, being as follows.

	<u>Per Share</u>
31% American Power and Light Company -----	3.54
32% Electric Power and Light Corporation -----	.44
Lehigh Power Securities Corporation -----	.04
45% National Power and Light Company	

Such cost per share immediately raises the question as to how the stock was acquired with so small an investment therein. A partial answer to this question is found on referring to the following table, wherein it shows that of the total number of shares of common stock held in these four supervised domestic holding corporations, the following percentage of such total shares was acquired at no cost, in money or property as in detail hereafter shown.

	<u>Per Cent</u>
American Power and Light Company -----	55.6
Electric Power and Light Corp. -----	17.9
Lehigh Power Securities Corp. -----	98.7

National Power and Light Company ----- 36.8

"Thus the bonus stock acquired by Electric Bond and Share Company have had considerable effect on the cost of the investment in the common stocks of the four holding companies. Another element that has had its effect on the average cost per share is the fact that the original common stock of the American Power and Light, Lehigh Power Securities Corporation, and National Power and Light Company, have been split 10, 10, and 15 shares respectively for each share of the old stock.

"In addition to this stock held by Electric Bond and Share Company a good deal of the remaining stock of these companies was originally offered as a bonus to the members of syndicates organized by the Electric Bond and Share Company to sell the security issues of its various subsidiaries.

"The following is an example of how the Electric Bond and Share Company managed to secure huge blocks of common stock at no cost. It hardly seems that the organization of this particular utility company was mainly to effect savings and efficiencies for the underlying operating companies

"The Utah Securities Corporation was incorporated with an authorized capitalization consisting of --

Common Stock	30,000,000
10 year 6 per cent notes	30,000,000

Of this authorized capitalization, \$25,000, or principal amount of notes were immediately subscribed for by various parties and \$27,500,000 common stock was issued to the Electric Bond and Share Company for \$5,000,000 par value common stock

National Bank and Trust Company

That the same shall be subject to the same

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investment in the common stock of the National Bank

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has been for many years, and it is

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There is no other way of doing so than by the

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amount of the same is \$100,000, and it is

and there is no other way of doing so than by the

and there is no other way of doing so than by the

of the Utah Power Company. This was apparently only a legal procedure in order to show some asset received by the Utah Securities Corporation as the real purpose for which this common stock was used was \$25,000,000 par value delivered to the subscribers of the \$25,000,000, ten years six per cent notes and the remaining \$2,500,000 par value of common stock was issued to Electric Bond and Share Company, as an arbitrary allowance for its risks and services in the transaction. It therefore seems apparent that the \$2,500,000 par value of common stock of the Utah Securities Corporation represented promotor's profit arising out of the organization of the Utah Securities Corp." *

The following are two other examples of proposed or actual overcapitalization:**

a) A group of utility men in Maryland wished to build a hydro-electric plant on the Susquehanna River. As the site came under the control of the Federal Power Commission they had to apply to that body for permission to issue the securities to finance the project. At first the promoters asked for permission to issue the following securities to secure the \$52,320,000 needed.

1. \$35,410,000 on Bonds
2. \$16,810,000 on Preferred Stock
- \$52,320,000 Total Cost of the Property

3. A large amount of Class A. Common Stock to be issued to the purchasers of the Preferred stock gratis.

4. An amount of Class B. Common Stock, which

*U. S. Federal Trade Commission's Investigation of Holding Co's Exhibit
**Main St. and Wall St. by William Z. Ripley P. 325 (4534)

would be given to the management involving no investment by the latter.

The Federal Power Commission refused to sanction such an obvious example of stock watering. As a result the following issue of securities was sanctioned.

1. \$35,410,000 Bonds
2. 10,000,000 Preferred Stock
3. Common Stock having a par value of \$25. to make up the remainder of the needed \$52,320,000.

b) A power syndicate in Montana purchased two utility properties at a cost of \$970,000. The promoters then organized the Montana Power Company whose sole assets consisted of the property of the purchased companies, with a capitalization of \$5,000,000.

"A prime cause for the excessive issue of securities in relation to value during the last decade was the frantic bidding for independent properties either for competitive or strategic purposes or for the immediate profit to be made by turning them over to some incipient combination*

I am going to quote another example of overcapitalization, taken from Letter 26, from the Chairman of the Federal Trade Commission to the Senate, entitled "Utility Corporations" "The Carolina Power and Light Company was incorporated April 6, 1926 under the laws of the State of North Carolina with its principal office at Raleigh, North Carolina. It was organized to merge and consolidate into a single corporation, all the corporate

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rights, franchises, powers, privileges, property, and assets of each of the following companies: Carolina Power and Light Company, Asheville Power and Light Company, Yodkin River Power Company, Pigeon River Power Company and Carolina Power Company.

" A duplication and inflation (i.e. an increase due to an arbitrary valuation having been put on the stock of the old Carolina Power and Light Company) of approximately \$19,100,000 in the fixed capital accounts of the present Carolina Power and Light Company at the time it was organized, and also the inclusion therein at the same time of over \$3,300,000 of unamortized debt, discount, and expense and other intangibles of the present Carolina Power and Light Company when it was organized from about \$38,500 000 to approximately \$60,900,000 or an increase of 58 per cent "The auditor for the Federal Trade Commission made the following statements regarding the above and as this is a typical case of the formation of an intermediary holding company I am going to quote the auditor "That inflation was accomplished by methods which were indefensible, namely --

First The creation of an intermediary holding company (without any assets except the consideration received for qualifying shares) and the issuance of its no-par stock at a stated value of \$500. per share, which was five times the par value of stock received therefor and approximately four times the value thereof as shown by the books of the issuing Company.

Second Transfers of that investment to affiliated companies at the same arbitrailly inflated value and issuance therefor of stocks at stated values which were correspondingly unjustified and

which constituted on abuse of the use of no-par stocks and stated values.

Third Provisions in the merger agreement which may be permissible under the laws of some states but which not only do but evidently were intended to preclude good accounting practice and distort the facts by failing to eliminate acquired surpluses and prevent the use of book values (in the absence of better evidence) as the governing factor as to what eliminations should be made to properly reflect the Consolidated results of the merger.

Fourth Failure to segregate such inflation and intangibles from those items of fixed capital which properly constitute the company's rate base, and by such failure handicap if not prevent the State Commission from intelligently determining whether or not the prevailing rates are proper.

Fifth Excessive accruals for taxes or at least failure to adjust the accrued liability for taxes so as to conform to reasonable current expectations, thereby understating to an appreciable extent the net income from corporations, a correct statement of which is essential for rate making purposes.

Sixth Inadequate retirement reserve, as indicated by the fact that provisions for some amounted to less than half the amount of depreciation and obsolescence the company itself claimed to have sustained in statements submitted for the purpose of determining its taxable net income. The cumulative effect of such inadequate provisions for depreciation and obsolescence sustained was to overstate to a considerable extent the company's net worth and income available for dividends, both vital factors in determining the value

and desirability of securities, concerning which it is important that present and prospective investors should have adequate and dependable information. *

"In defense of the practice of purchasing operating companies for several times the face value of their existing capitalization, and consolidating them into a new company on the basis of their purchase price, it has been urged that the customer cannot be affected by the number of pieces of paper issued by the new company, since he is protected by the limitation of earnings to a fair return on the value of the property. Theoretically this is so, but practically he does not have a full protection from injury unless injury is by definition limited to the rates charged. The injury from inadequate service and the inability of a company to care for the growth of a community is quite a real, and often much more serious, and yet this must be the result in the case of an overcapitalized company which, through its limitation to a reasonable return on the property value, has earnings insufficient to maintain its credit. The public has had enough of receiverships in the recent trolley situation, and would yield to the demand of a company to be allowed to earn more than a reasonable return in order to maintain its credits as being the lesser of two evils. Consequently, we must shape our course in such matters with a clear knowledge that the public has an interest in the extent of the capitalization of our companies and that if our liberty of action in this respect is abused, as it is today being abused in some cases, there will be an eventful day of reckoning, and when that day "Utility Corporations" Letter No. 26, P. 64 by the Chairman of the Federal Trade Commission.

comes it may not be possible to separate the sheep from the goats.

"When a company is sold for many millions of dollars more than has, apparently, been paid into the treasury for the purpose of providing facilities for service, we must realize that the public is bound to sit up and take notice. What the public sees is that only a comparatively small fraction of the purchase price is represented by what the company receives for the stock at the time of issue and that the new owners must of necessity earn a return on the whole of the price paid; therefore, regardless of the soundness of the reasons which may justify the transaction, it is only natural to expect that the public will insist on being convinced that its interests are fully safeguarded, and apparently it does not today feel at all sure that such is the case. It is, indeed, a very curious situation which exists at the present time in that the stocks of our operating companies are of so great real value to the holding due to the future equities contained in the same, that they should not be parted with except for a price so high as to make the recapitalization of that price a potential cause for future antagonism.*

8. Statements of Holding Companies

The statements issued by the holding companies leave much to be desired. Practically none of these holding companies issue a genuine consolidated balance sheet in which all intercompany profits would be eliminated. The companies follow no uniform practice in the handling of depreciation and maintainance items. More often than not they show net income before depreciation

* President Samuel Ferguson of the Association of Edison Illuminating Cos. in 1926. (Source-"Main Street and Wall Street" by W.Z. Ripley, Page 327-8.

has been deducted. In many cases depreciation reserves must be set up or indicated by agreements with the bondholders and therefore the charges for depreciation are necessary before any dividends are paid out. William Z. Ripley in his book Main Street and Wall Street comments on the accounting practices of the utilities during the last few years. "We need simplification of structure. Maintenance and depreciation items should be elucidating. The policy generally adapted by the public utilities of bulking maintenance and depreciation indistinguishably in one figure is wrong. Continental Gas and Electric Corporation is typical of most of the utility holding companies which report net earnings after deducting all operating expense, but before deducting taxes and depreciation. Such a policy really makes use of depreciation to smooth out the curves of net earnings from year to year, selling off depreciation heartily in good years and letting up on it otherwise. The real fact is that depreciation is just as much of an operating expense as consumption of supplies ---"The above sheets prove to be inadequate or misleading in two respects.

(1) One is the downright omission of important items in the property account.

(2) Another is the failure to disclose the method of valuation whether it be of property or stock.

"Profits which flow from inter-company financing by management companies, either controlled or owned by holding companies, but in either event component parts of the system, should not be distributed as profits. Many of them would disappear from a

consolidated system income statement when pluses and minuses conceal one another. (inter-company elimination) Perhaps the latter is the reason why so many public utilities do not show consolidated balance sheets. Middle West Utilities reported a net in 1925 of \$5,842,000. Of this sum \$3,265,000 is net profit from the sale of securities to subsidiary Companies and others: As aggregate dividends on stock of Middle West Utilities were \$4,591,000 the latter company could not have paid them unless they handled the above as profits.

"Many of the management profits of the top companies come from lively rearrangements of subsidiaries, construction enterprises being planned financed and administered. All the profits from such phrases of management are far from being regularly recurrent. Many of them are incidental to rapid expansion."* This is a point that should be duly emphasized. We have evidence all about us that the management of the large holding companies realize that the time has arrived when this expansion has slowed down considerably, and that this is not merely an effect of the depression. Almost all experts agree that the future expansion is going to be slow and is going to rest on the ability of the utilities to increase the average consumption from consumer.

I have indicated how the statements issued by most of the holding companies are not only inadequate and misleading from the investor's standpoint but also from the viewpoint of the state commissions. What we need is uniform accounting for the electric light and power utilities as we have uniform accounts for the railroads. If large holding companies own the securities of

unpublished material (which is not a part of the official record)

and the other, (which is a part of the official record)

The latter is the one which is now being published

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or otherwise control operating companies in the field, they should be forced to conform to such laws regarding regularized accounting. Too long they have been on both sides of the fence at the same time, posing as utility corporations to their investors but avoiding commission control by declaring that they are not corporations actually engaged in the electric light and power industry.

B. Direct Results of the Financial Debacle of the Past Decade.

In his book Main Street and Wall Street, Ripley sounded a note of warning that went unheeded at the time but we have ample evidence about us of his foresight. He said in 1927, "Thus far disaster has been avoided because of the essentiality of the service of the operating companies, combined with the appreciation in prices and land values. But whether the financial practice of these companies in the issuance of **securities** based upon a reproduction theory of valuation at the very crest of a period of inflation of prices following the war will work out satisfactorily, remains to be seen."

Ripley gives the companies the benefit of the doubt by assuming that they increased the book value of their assets on some more or less tangible basis of reproduction value. However I think I have given enough examples to make it clear that in a good many instances the asset side of the balance the inevitable effects of such inexcusable financial practices. We have heard a good deal of criticism of investment trusts of late. Actually some

of our large public utility holding companies have all the powers of investment trusts granted them in their charters, in addition to an innumerable amount of miscellaneous powers (see quotation from the charter of the Electric Bond and Share Corporation, page 111-112).

1. Electric Bond and Share Corporation.

In 1932 this large holding company wrote down its assets fifty per cent, from \$904,093,646. to \$462,705,992. the surplus account from \$708,619,491. to \$41,937,030. The Corporation then wished to pay its regular dividends. In its report to the stockholders, the directors stated, "Your company is incorporated under the statutes of the State of New York, and these statutes contain a provision that no corporation shall declare

or pay any dividend unless the "value of its assets" remaining after the payment of such dividend shall be at least equal to its capital and other liabilities --- If, however, current market quotations of investment owned by your Company are a measure of value of its assets, the existing excess (stated by them as indicated above at \$41,937.03.) might be eliminated by further market declines." Now let us look at this last statement. We find that actually the market value of these assets was \$217,957,000 or \$244,848,922 below the value stated above which would leave a deficit of about \$243,000,000 instead of the surplus of \$41,937,03. Still the company insinuates that the surplus is all right now but that "further market declines might eliminate it." The directors, therefore in February 1932 asked the stockholders for permission to call in all the common stock outstanding and issue new stock on the basis of one new share for each 3 old shares. Otherwise the company would not legally be allowed to pay dividends that in any event would simply mean the payment of stock or paper dividends. Their annual report shows a drop on net income from \$42,355,163 in 1930 to \$25,050,084. This is quite a drop when we realize that most of the assets of the corporation consist of stocks in electric light and power companies, which are part of an industry that showed only a .6% decrease in revenues from 1930 to 1931. The explanation lies in the fact that the income before 1931 was inflated by huge profits on contract charges made to subsidiaries that could not be made in 1931.

2 Stone & Webster

Stone & Webster revalued its investments as follows

according to present Jan. 1932 market values ~~fair~~ book values

(a) A reduction of \$16,565, 000 in the value of certain miscellaneous securities.

(b) A reduction of \$56,839,448 in the book value of the common stock of its subsidiaries held by the parent company. This involved the reduction of the book value of the stock of the Sierra Pacific Electric Company and the Engineers Public Service Company to \$30. per share.

(c) The reduction of \$3,304,000 of the value of the stocks of other subsidiaries. This meant a reduction in the book value of the company's assets of \$71,500,000. To balance this capitalization was reduced a like amount giving each share of common a value of about \$34.

3. Niagara Hudson.

On April 15, 1931, the stockholders of the Niagara Hudson Power Corporation are to be asked to give their directors permission to reduce the capitalization by a reduction in the number of common shares outstanding from 45,000,000 to 15,000,000 which will mean a reduction in capital from \$450,000,000 to \$225,000,000.

Why is it that we find that it is the public utility holding company that finds it necessary to so reduce its capitalization? There is only one answer. Their earnings are not now, and it is doubtful if they ever will be sufficient to warrent this former capitalization. The companies were overcapitalized. I have indicated some of the watered stock held by the Electric Bond and Share Company. Of course the Companies can create a surplus

by dropping their capitalization. This is just what Electric Bond and Share Company is doing in order to pay stock dividends. Such a procedure is never justified. The surplus so created is not an earned surplus but merely a paper surplus.

4. American Community Power Corporation.

"Three receivers have been appointed for the American Community Power Corporation of Grand Rapids Michigan, on grounds of insolvency. The corporation is the principal subsidiary of the American Commonwealth Power Corporation, a \$220,000,000. public utility holding company, for which three receivers were appointed on Thursday. The assets of the American Community Power Corporation are listed at \$69,000,000. It serves 273 communities in the West and Southwest with gas and electricity. Three of the directors of this company were:

1) Mr. F. S. Burroughs, vice president of the Chase, Harris Forbes Corporation, and president of the Public Utility Holding Company of America.

2) Mr. G. F. Devendorf, vice president of the United Founders Corporation, and a vice president of the Public Utility Holding Company of America.

3) Mr. Elmer G. Diefendbach, head of the investment firm of G. E. Barrett and Company."*

*"New York Times" Jan. 4, 1932

5 Tri Utilities Group (N. Y. Times)

1. Prospects for reconstruction of the Tri-Utilities Corporation vanished last week with the acquisition by banks of the entire voting stocks of the Federal Water Service Corporation. With the Peoples Light and Power Corporation already segregated from the original reorganization plan, it now appears likely that Federal Water & Service will remain outside the plan and that a separate reorganization for the Oklahoma Natural Gas Corporation and the American Natural Gas Corporation will be necessary -- The Greene Mountain Power Corporation was detached and sold at auction to the New England Power Association and the Eastern Minnesota Power Corporation another of the units was sold at auction for the benefit of the Manufacturers Trust Company. - Such banks as have acquired title to shares and other securities, or which may do so, are desirous of selling their properties as soon as possible, the purchases having been intended merely to wind up the legal steps following defaults on loans -- Persons conversant with the situation feel that there is little hope that the security holders of Tri-Utilities can recover much if anything in view of the individual difficulties of most of the subsidiaries and the changed situation, resulting from the auction of the Federal Water Service shares.

"With the dispersal of the major units thus probable, eliminating the Tri-Utilities Corporation as a holding company for the system, the following probabilities appear likely:

The Federal Water Service Corporation will be an independent utility group with none of its properties in receivership and the parent company itself in sound condition, with the Chase National Bank and the Central Hanover Bank and Trust Company dominant in its affairs until their holdings can be sold to another group or to a syndicate.

The Southern Natural Gas Corporation whose first mortgage bonds will not be disturbed, may go into the Federal Water Service System if present plans can be worked out. Federal Water Service already holds most of the common shares of Southern Natural Utilities by its subsidiary, and while the present value of these common shares is debatable, the plan is to place the Southern Company under control of Federal.

The American Natural Gas Corporation on the Oklahoma Natural Gas Corporation and a few minor subsidiaries are to be reorganized under a separate plan intended to leave the first mortgage gold bonds of the Oklahoma Company undisturbed. Scaling, therefore, will be necessary in all other securities of this group.

The Peoples Light and Power Corporation which has lost Green Mountain Power and the Eastern Minnesota Power and the Wisconsin Hydro-Electric Company, which the Minnesota Company controls, is the object of a separate reorganization plan which is still in a barely tentative stage.

6. Associated Gas and Electric

Although the greatest service supposed to be supplied by a holding company is the aid that it gives to its subsidiaries in financing, we find that during the last few years, the large

independent operating companies or strong holding operating companies such as the Consolidated Gas of New York have been able to secure funds at much lower rates than have the large holding companies. For example during February the Consolidated Gas of New York sold a large issue of bonds bearing an interest rate of five per cent, very near par. Compare this to the following issue of the Associated Gas and Electric Company whose financial structure Ripley characterized as a nightmare, even before this latest issue. The quotations from the Boston Herald, Feb. 23, 1932.

"Undoubtedly the most ambitious financing program to be fostered in many months is that announced today by the Associated Gas and Electric Company. This plan calls for the issuance of \$40,000,000 of guaranteed 8 per cent eight year bonds at par. The issue will also carry stock purchase warrants detachable after March 15, 1932, allowing for the purchase of common stock at any time during the fifteen year period. The bond indenture further provides for the additional participation in interest up to two per cent per annum.

"This financing is made necessary by the sizable volume of securities maturing this year. It will rank prior as to payment of interest and principal to all of the outstanding debt of the Associated Gas and Electric Company.

"This coupon of 8 per cent is the highest rate of interest to be attached to a sizable bond offering of a nationally known public utility Company in many years." The reason for such a high rate and in addition all the added features should again be obvious

the investors do not want the bonds of this company and every inducement must be made as for example, giving the bonds priority as to interest and principal, over all outstanding bonds of the corporation. At the same time an operating company, as indicated above is able to obtain funds at an approximate cost of five per cent. With the bonds of the Associated Gas and Electric Company selling on the New York Curb for from 35 to 42 cents on the dollar before this issue was offered. The need for plenty of selling points is all too evident.

7. Middle West Utilities

Plans for recapitalization of the Middle West Utilities Corporation, may entail the sale of some of the properties owned. The company reported a net income for 1931 of \$17,138,664 against \$19,160,618. In 1930 or on a per share basis, \$1.08 in 1930 against 86¢ in 1931. As a result both the regular preferred and common dividends were passed by the board of directors, in March. It was stated that the omission of these dividends was necessary in order to protect the company's cash resources. We quite agree with the latter statement made by Mr. Martin Insull, when we find that total assets are listed at \$301,193,481 and of these only \$2,626,851 was listed as cash. Mr. Insull went on to add. "Both your company and its constituent holding companies have large bank loans which sooner or later will have to be refunded. Adverse money Conditions for nearly ten years past have prevented the issuance of capital securities to provide for investments represented by their temporary bank loans"*

*Middle West Utilities Annual Report

8. Public Utilities Consolidated Corp. (W.B.Foshay Group)

This company and associated companies was known as the Forshay Group. I am going to quote from a report of the Federal Trade Commission regarding this group of companies.

UTILITY CORPORATIONS*

This report on an examination of the corporate and accounting records of Public Utilities Consolidated Corporation (Delaware) and of Public Utilities Consolidated Corporation (Arizona) is submitted in connection with the inquiry under Senate Resolution No. 83, Seventieth Congress, first session.

Some of the principal features of the report are summarized as follows:

1. Both of the corporations mentioned above were organized, controlled, and managed by W. B. Foshay Co., an organization with headquarters at Minneapolis, Minn.

2. The first Public Utilities Consolidated Corporation was incorporated under the laws of the State of Delaware on April 26, 1927. Three months later on July 23, 1927, another Public Utilities Consolidated Corporation was incorporated under the laws of the State of Arizona.

3. The application of W. B. Foshay Co., a licensed broker, for registration for sale of a certain number of shares of Public Utilities Consolidated Corporation (Delaware) preferred and common stock was denied by the commerce commission of the State of Minnesota. After stating various reasons for denying the application, the commerce commission expressed an opinion that the sale of these securities would "work a fraud on the purchasers thereof."

*Letter No. 25, Report of the Federal Trade Commission, Page 53 - 57

4. In April, 1927, when the books of Public Utilities Consolidated Corporation (Delaware) were opened, an amount of \$133,599.16 was set up in an account under the caption of "Capital surplus." In the following month this amount was transferred to value of class A and class B common stock account, and the capital surplus account was closed. During the months of May and June, 1927, by authority of the board of directors (see Exhibit No. 6 and Appendix 3 within Exhibit No. 4653) amounts totaling \$75,000 were transferred from the value of class A and class B common stock and credited to an "Earned surplus" account, against which charges were made for dividends on preferred and class A common stock of the holding company, together with the interest on its 1-year 5 per cent notes.

5. The reasons given by officers of the W. B. Foshay Co. for promoting and organizing another holding company within such a short time after the organization of the Delaware corporation was that it was desired to incorporate in a State where the issuance of all securities, and the valuation of the properties for which the securities were to be issued, was under the jurisdiction of a State regulatory commission. These facts were considered good selling points to be stressed in the disposal of the corporation's securities to the public.

Another probable reason for the organization of the new company was the desire to sell securities in certain States without the necessity of obtaining permission of the regulatory authorities of those States--the laws of some States making approval of local authorities unnecessary when the issuance of securities has

been passed upon by the State in which the company was incorporated.

6. As of October 31, 1929, over 78 per cent of the voting stock outstanding of Public Utilities Consolidated Corporation (Arizona) was held by W. B. Foshay Co., while 46.8 per cent of the W. B. Foshay Co. voting stock was owned by Wilbur B. Foshay. Thus, for all practical purposes, the control of W. B. Foshay Co. and of Public Utilities Consolidated Corporation (Arizona) and subsidiaries was vested in one individual.

7. The cost as of September 30, 1929, of the California properties owned by Public Utilities California Corporation, a subsidiary of Public Utilities Consolidated Corporation, based upon valuations by appraisal engineers, was carried on the books in the total amount of \$2,329,551.55. This was 50 per cent higher than the valuation figures arrived at by engineers of the railroad commission of the State of California. The California commission would not allow the appraised values, and adjustments aggregating in amount \$778,877.94 were made in the accounts of the holding company and its California subsidiary. This item of \$778,877.94 is shown among the assets on the balance sheet of Public Utilities Consolidated Corporation as of September 30, 1929, under the caption of "Excess appraisal value over valuation allowed by State commissions."

8. In July, 1928, an amount of \$1,434,391.87 was set up on the holding company books as "going-concern value," the corresponding credit being made to "value of Class A and class B stock" account, the latter account being written up from \$1,548,403.83 to \$2,982,795.70 an increase of 92.6 per cent.

9. Practically all of Public Utilities Consolidated Corporations

common stock, preferred stock, and bonds were issued to W. B. Foshay Co. in payment for the physical properties and/or securities of other companies contracted for. However, Public Utilities Consolidated Corporation did not wait until it received the properties and/or securities contracted for before delivering its own securities to W. B. Foshay Co., but delivered the securities in advance of such receipt, evidently so that the Foshay Co. could sell them in order to obtain the funds with which to meet its own contracts with the vendors.

10. On October 31, 1929, there was a balance due to Public Utilities Consolidated Corporation (Arizona) from W. B. Foshay Co. of \$7645,321.32. Of this amount \$5,133,426.19 represents the value of utility properties contracted for but not delivered by the W. B. Foshay Co., but for which Public Utilities Consolidated Corporation had paid for, principally through the issuance of its own securities; \$2,511,895.13 was the net amount due from W. B. Foshay Co. on open account and notes, the greater part of this amount being for Public Utilities Consolidated Corporation securities issued to the Foshay Co.

In commenting upon the amount due from W. B. Foshay Co. Mr. Joseph Chapman, the receiver of Public Utilities Consolidated Corporation, in his second report to the court (Exhibit No. 24 within Exhibit No. 4653) states that "the obligation of \$7,645,321.32 listed above as owing to Public Utilities Consolidated Corporation by W. B. Foshay Co. is of very doubtful value. W. B.

Foshay Co. will no doubt be entitled to a credit upon that obligation for the net proceeds from the disposition of the acquisition contracts hereinafter mentioned. So far as the balance of the claim is concerned, the possibility of recovering any substantial amount thereof is doubtful. I will, however, make every effort to realize all that I can therefrom."

11. It was customary for the W. B. Foshay Co. to pay Public utilities Consolidated Corporation an amount equal to two times the interest and/or dividend requirements on all of the bonds and capital stock issued and delivered to the Foshay Co. in advance of the transfer of properties contracted for but not delivered by W. B. Foshay Co. to Public Utilities Consolidated Corporation, the liability beginning with the date of transfer of the securities and ending on the date of the transfer of the properties. In the year ended September 30, 1929, these payments, in lieu of income from properties paid for but not delivered, amounted in the aggregate to \$515,859.69.

12. In the month of August, 1929, dividends were declared for the first time on class B common stock, and, although the corporation was on the verge of bankruptcy, during the months of August, September, and October, 1929, dividends were declared on class B common stock in the total amount of \$51,348 which would necessitate, in order to meet the requirements of the articles of incorporation, the declaration of extra dividends on class A common stock in the amount of \$17,116.

A little later in the same letter some examples of how the company fixed its books, are given. I will quote, "For the year 1926

income, as shown per the books was \$16,340.91. Adjustments from the surplus account would have been a loss of \$1,733,114.76 as the corrected amount would have been a loss of \$1,733,114.67. In 1928 the income as shown per the books was \$497,595.39, the adjustments from surplus were \$324,768, or a corrected income of 172,827.39. In 1929 up to October 31 the income as shown per books was \$290,200.65, adjustments from the surplus 515,796.51, or a corrected income, or rather a loss of \$225,595.86. The Commissioner then asked the following question. Would there have been any net income for the period 1917 to October 31, 1929, if the securities had not been appreciated? Answer. Taking into consideration this appreciation, yes; the net income for the period shown as \$1,692,000 should be reduced by the amount of the unrealized appreciation of \$1,501,698.49 or a net income of 190,578.50. However, there was another item of unrealized profits of \$441,992.06 on the sale of utility properties. Taking this item into consideration, there was in reality a loss of \$225,595.86 instead of a net income over the period of \$1,692,000.*

Thus we find a public utility holding company operating at a loss for twelve years but showing a profit on its books to its stockholders. We are not surprised to find that a receiver was appointed for these properties on November 1, 1929. Mr Foshay had,

* Letter No. 25 from Chairman of the Federal Trade Commission to the Senate Page -53-57

during his activities since 1917,sold securities totalling over \$29,000,000. to the public. His activities were found to be so fraudulent that a Federal Grand Jury indicated him and he was sent to the Federal Penitentiary. After spending some time reading the reports of the present investigation of holding companies,I wonder if we will not find several other magnates joining Mr.Foshay in prison. I am sure that a good many of them belong there but probably the government will not be able to secure enough evidence to indict them, under our present set of corporation laws.. As W.Z.Ripley says,our corporation laws are so loose that they allow the directors to do almost anything without incurring personal liability for their acts.

9. The following corporations are also finding it necessary to reduce their over expanded,top heavy capitalizations:
- a)Commonwealth and Southern Corporation.
 - b)Hydro-Electric Securities Corporation.
 - c)Utility and Industrial Corporation.
 - d)United Founders Corporation.
 - e)Phoenix Securities Corporation.

Part IV.

Regulation.

A. The Electric Light and Power Company as a Utility.

"A public utility is a public or private enterprise designed to furnish a service to a community that is deemed by the community to be necessary or desirable for the public welfare, and the furnishing of which is commonly considered to be a public function."¹

"The far-reaching social effects and functions of the electrical industry in our social system were recognized with relative alacrity. It was seen by its very nature to be a quasi-public enterprise, and as such subject to an entirely different type of control and an entirely different code of ethics than private business. The relative welfare of large sections of the population was dependent upon an abundant supply of power at reasonable prices. It became a necessity not only in industry but in the home and in the city streets. Competition in distribution was so costly to the public that it became necessary to eliminate it, to grant monopolistic privileges. The same development is now taking place in regard to generation of power. The industry furthermore could not grow without the privileges of using such public properties as streets, highways and water courses. It needed further the privilege of exercising the state's power of eminent domain. It was impossible for an industry so essential to the country and deriving so many privileges from the state to be considered a private industry. Its importance in our

1. "The Public and its Utilities" Raymond P. 3.

economic and social life, together with the freedom from competition granted it by the state, gives it certain responsibilities to the public which other industries do not have. A different code of ethics governs or should govern its policies.--- Its employees are quasi-public officials---render such conditions the conduct of the industry and its employees must be considered in the light of social values."¹

B. History of Regulation.

"The regulation of public service corporation has assumed such importance in recent years that there is general disposition to consider it a modern method of securing justice between the public and corporations. A study of early public utility companies and the laws dealing with them warrants no such conclusion. The service of these companies to the public was recognized from the first and was given is one reason for granting charters. As early as 1784 Massachusetts lawmakers incorporated the properties of a bridge co. because the bridge co. would be a "great public utility" (Laws & Reserves of Massachusetts 1784, Chapter 53) -- The early companies were of course comparatively simple, consisting largely of turnpike, canal bridge, and ferry companies. Yet in the regulating provisions concerning them are found the germs, if not the actual statements, of practically all our present methods of regulation."²

When a public utility is incorporated it is given a franchise. In the early days the local authorities sought to

1. "Electrical Utilities - The Crisis in Public Control" William E. Mosher & Associates P. XVIII
2. "Material for the Study of Public Utility Economics" by Dorau, Page 283.

designate the powers of the utility in its franchise. Through the use of these the municipalities attempted to set up standards of service and rates. One of the worst features of this method of control was its inelasticity, "Then too local officials were not always alive to the needs of a given situation. To this must be added the tale of corruption and graft which blackened the early history of American municipalities. The buying and selling of franchises constituted one of the most lucrative sources of illegitimate gain. All in all, local control, although appealing to a certain civic enthusiasm, was not a success. It was gradually abandoned in favor of state control."*

The result was the growth of state public utility commissions. These were at first organized primarily to regulate the railroads. "Regulation was first applied to railroads about eighty five years ago when the total railroad mileage in the United States did not exceed 4,000 miles. Two railroad commissions were established in New England in 1844---in New Hampshire and Rhode Island. Four others were established in Maine, Vermont, Connecticut and New York in the fifties. The Massachusetts Railroad Commission was established in 1869. In 1885 railroad commissions existed in twenty-seven states. Their duties and powers were quite limited, including primarily the collection of statistics, enforcing of safety provisions, investigation of the adequacy of service, and the rendering of annual reports of railroad operations to their legislatures with recommendations as to needed new legislation.---

"The first state commission having jurisdiction over

* "Electrical Utilities" William E. Mosher P. 3.

local public utilities was organized in Massachusetts in 1885. It first dealt with gas companies only, but two years later it was expanded to include electric companies. In 1888 the commission was given supervision over rates in a limited way, and in 1894 it was given control over capital issues, thereby extending its scope to practically the full range of present-day regulation.----Supervision of a limited character was instituted in Virginia in 1903 and in New York State in 1905.---

"It may fairly be said that aside from the pioneer work in Massachusetts, modern regulatory methods through state commissions had their beginning in 1907 when the States of Wisconsin and New York established commissions having very broad jurisdiction and authority over all forms of public utilities and intrastate transportation. Following the organization of these commissions in 1907 and their immediate success, other states rapidly adopted similar methods to meet urgent needs of utility supervision.----

"At the present time every state in the union except Delaware has a regulatory commission exercising duties over all or a part of the public services within the state. The District of Columbia and the insular territories of Hawaii, Porto Rico and the Phillipines also have commissions with broad powers. The commissions in nine states lack broad jurisdiction over local utilities being limited largely to railroads, communication companies and in some cases, interurban railways. Thirty-eight states, the District of Columbia and the territories of Porto Rico, Hawaii and the Phillipines have commissions with broad jurisdiction over all classes of public utility service.

"Regulatory functions are performed by commissions having from three to seven members. Thirty-six of the state commissions consist of three members. The members of these commissions are either appointed by the governor, usually with confirmation by the upper branch of the legislature, or elected by the people. The former method is more common, being in effect in at least twenty-six states and is much to be preferred because of greater freedom from political influences and obligations. The terms of office of the commissioners run from three to ten years, with six years as the common practice. It is apparent that the exacting duties of a commission call for broad experience, sound judgment and freedom from political bias or influence. The salaries are at present too low to secure such men---and the compensation is not consistent with their responsibilities."*

C. The Problems of Regulation.

1. State Regulation.

I have traced the history of regulation briefly. It grew up as a means of controlling operating companies and I am going to show some of the problems that it has confronted.

a) Service Standards.

The commissions are supposed to secure adequate service for the public. They therefore have prescribed and enforced reasonable standards of service such as continuity of supply, voltage regulation, the testing of meters, and the inspection of property with a view to safety and efficiency of operation. As the cities grew they had the utilities lay their cables underground.

* "The Economics of Public Utilities" L. R. Nash P. 95-96

b) Extensions.

The commission decides whether or not certain extensions are justifiable and they may force the utility to provide service in certain districts not yet supplied by the utility.

c) Accounting.

The commissioners of the different states meet once a year at a convention when they discuss their various problems. One of the greatest results of these meetings has been the formation of uniform accounting rules and practices. Most of the commissions now make their operating utilities use the prescribed system of uniform accounts.

d) Capitalization.

Only two of the state commissions have jurisdiction over the capitalization of utilities. These states require that proposed security issues be approved by the commission before they are issued. It is true that most states have a series of blue sky laws which govern the sale of securities. However these are inadequate for even the general supervision of securities as is shown by the large amount of fraudulent issues floated. How can such laws therefore safeguard the customers of public utilities from the results poor financing by the utilities.

e) Rates.

Of course all commissions have jurisdiction over rates and this is probably their most important function. The commissions realize that they must consider not only the rights of the customers but the rights of the owners of the utility in the question of rates. In *Smyth V. Ames* it was stated that rates should be high enough but no more than enough to produce revenues

that will enable the companies to pay all legitimate expenses and to make a reasonable return.

The reasonable return is based on the "fair value of the property of the utility being used by it in the convenience of the public."* The Federal Courts have designaged the "re-production cost less depreciation" method as the one to be used in ascertaining the fair value of the property. The utilities favored this method as construction costs were rising but now that costs are falling they will probably try and have the costs favor the prudent investment method if they feel that the latter will give their property - higher value as a rate base.

From the standpoint of valuation two Constitutional amendments are important. They are the Fifth and the Fourteenth Amendment.

Extract from the Fifth:

"No person shall be compelled in any criminal case, to be a witness against himself nor be deprived of life, liberty or property without due process of law; nor shall private property be taken for public use without just compensation."

Extract from the Fourteenth:

"Nor shall any State deprive any person of life, liberty, or property without due process of law, nor deny any person within its jurisdiction the equal protection of law."

At this point I wish to emphasize the fact that there is a distinct difference between the duties of the Federal Courts and those of the state commissions in regard to this matter of rate making. "....the function of the courts is to lay down the basis

* Smyth V. Ames. 169 U.S.466,42 L.ed.819,18 Sup. Ct. Rep. 418.

of confiscation, to set the irreducible minimum below which commissions may not legally go in determining rates....The duty of regulatory bodies is not the negative one of fixing rates which merely escape confiscation, but rather the positive duty of fixing rates which are adequate from a business standpoint--- i. e. Every rate proceeding involves the questions, "What is a constitutional rate?" and "What is an economic rate?"¹

In the early days of regulation, at the time of the Smyth v. Ames case, the public and commissions were only too well aware of the stock watering and other elements of questionable financing that featured growth of the railroads. In determining the "fair value of the property" it is therefore not surprising that they wanted some other proof than that presented by the company's book values. The commissions decided on the called reproduction value less depreciation as a basis for the valuation. In this way they hoped to eliminate any fictitious values from the rate base. The rule while not at all definite in concept, appeared to work reasonably well up to the time of the War. Or at least we should perhaps say that it kept rates low and prevented either the railroads or the electrical utilities from earning very satisfactory returns.

As the War advanced prices rose and we have indicated in another section what was the initial effect of such an economic change. The cost of the materials used by the utilities and the cost of labor rose while their rates remained fairly stationary. All during this early period of regulation the utilities had been pleading for the investment theory of valuation for

1. Professor Pegrum, *supra*, note, at pages 238, 239. (Source, "Regulation of Public Utilities" by Clay Page 43

they felt that it would give them a larger rate base than did the reproduction theory.

However the utility managements finally saw how they could profit by the turn of events. They all began to demand that their properties be valued on the reproduction cost basis. The courts had held this to be the proper basis and so revaluations went ahead. As prices of materials had mounted greatly the properties were given a higher value on which to earn a fair return. We will of course agree that as the expenses of the utilities rose their rates should be increased also. However the increases based on these new values were way out of line with the corresponding increases in expenses.

Value in regard to a public utility has no economic meaning whatsoever. It cannot stand for the common "value of exchange" for there is no basis for comparison. It is a monopoly but it can not be given a monopoly value in the strict sense of the term for such a value is based on "what the traffic will bear" but a utility can not determine its charges in this manner but is subject to strict regulation. "Value implies and requires competition, a market and free contact, all of which are lacking from the utility field."¹

In speaking of reproduction value, Professor Pegrum says, "It is pure fiction, bearing no relation whatsoever to reality, regardless of unit prices that may be used. It is so unstable that if adopted, a new valuation would be required, not only with change in the general price level, but also with changes in the individual prices of all materials used in construction, as well

1. Gray, supra, note 7, at pages 58 and 59, see Clay "Regulation of Public Utilities" P. 48

as with the varying costs of labor."¹

After forty years of this type of regulation we still find that we have no definite law in regard to valuation for the rate base. What is fair value rests in the last analysis in the judgment of the particular commissions and laws courts before which the case is tried.

f) Management.

Re. Southwestern Bell Telephone Co. 262, U.S. 276.

So far as appears, plaintiff in error's board of directors has exercised a proper discretion about this matter requiring business judgement. It must never be forgotten that while the State may regulate with a view to enforcing reasonable rates and charges it is not clothed with the general power of management resident with ownership.

2 Federal Regulation.

That the state commissions have done good service is without question. However due to two important factors many students of regulation feel that Federal Regulation is inevitable.

a) The Interstate Transmission of Energy.*

Although in 1920 the interstate transmission of electricity was insignificant, in 1930, 13 per cent of all the electricity generated in the United States was exported across state boundaries, or 11,898,000,000 kilowatthours. That there is a need for regulation of this power is quite evident. We find that five states, Missouri, Utah, Arkansas, Mississippi and Delaware imported in 1930, over 50 per cent of all the electricity that they consumed, the latter two importing over 88 per

1. Professor Pegrum, supea, note 1, at page 129, see Clay

"Regulation of Public Utilities" Page 50

* Statistics from "The Electric Light and Power Industry" No. 7

cent of their total consumption. The commissions say that they control it by controlling the companies that purchase this power. However, how can they determine whether or not the utilities are paying too much for this power if they have no way of adequately checking the costs of the producing company.

b) The Holding Company.*

We have shown how the holding company has come to be the dominant power in the electric industry. How is it to be regulated? At the present time the holding company is generally exempt from direct public regulation. The managers and bankers who demand that it remain so are echoing the cry of those who opposed regulation of operating companies twenty years ago. They forget that though the possible advantages (i. e. of unregulated holding company operations) are undeniable, every one of them carries with it an attendant danger. In the competitive struggle for territory that was going on until recently, when financial conditions stayed it for a time, the reappearance of the old evil of purchasing control at excessive costs was evident as I have indicated by numerous examples. The comparative ease of financing led to the inflation of security issues, to the hiding of profits under 'no-par' stock of the hiding of losses by the same device, and to fictitious brokerage charges and other devices. Also as William Z. Ripley says, " The device of ownership from control by non voting common and preferred stocks and by the principle of trading on the equity, and by the practice of pyramiding of one holding company upon another to the magic number seven,

* Excerpts from "Regulations of Holding Companies in the Public Utility Field" by P. P. Wells The Academy of Political Science XI (1924-6) 708

steadily enhances the need of intervention by the government in all lines of business, especially those in any way affected with a public interest." Customer ownership may well dull the sense of public right. The controlled construction company (practically all of the large holding companies have their own construction companies) opens the door to inflation of construction costs. I have also indicated how the service, management and financial contracts imposed on their subsidiaries by the holding companies have been very unreasonable. If the history of the railroads teaches anything we may be sure that there are germs of unduly high rates, inadequate service, shackles on expansion, disaster to investors permeating the holding company structures. And we have no assurance, such as competition affords in ordinary business, that a due proportion of the possible great economies will be passed on to the public in the form of better and cheaper service.

"It is no answer to say that electric current is more abundant and cheaper than it used to be. The investor and the research departments of the electric manufacturing industry have made it so. It is abundant and cheap as it ought to be! And what is more important, will it be enlarged and cheapened in the future as it ought to be?

All these evils will have their repercussions if not avoided. Investors will not supply the capital for expansion that is so essential to the industry and what is supplied will be obtained at high rates. The cost of capital must be included in utility rates and if the credit standing of the industry is impaired the consumers will not be long in feeling the effects.

At a recent conference of utility commissioners held in New York City the policy committee reported that regulation has failed in their major respects. I will quote from the records of the meetings.

"Regulation as now administered has failed to protect investors in public utility securities against the loss of billions of dollars resulting from unsound methods of valuation and financing. It has failed to secure for the small consumer rate reductions corresponding to the decline in prices and wages on the technical trend toward increased domestic use. It has failed also to safeguard the credit of companies placed under its supervision and control.--

"Effective regulation of public utilities has been progressively weakened as a result of the definite policy of evasion imposed upon the industry by promoters who control public utilities in the interest of speculative profits derived from manipulation of their securities. Today it falls far short of achieving its major objectives; the consumers right to possible readjustments, protection of the investor, and the protection of the credit of public service companies.

As evidence of the failure of regulation the committee enumerated the following, "retail rates not based on true cost but made to bear the brunt of assuring the company a so-called fair return; valuation on a so-called fair value basis which enables the companies to justify and legalize almost every type of unearned increment, tangible and intangible, which accrues to unregulated monopoly; accounting which tends to conceal and distort; holding companies outside regulatory control, which en-

courage uneconomic forms of consolidation, stock watering, capital inflation and similise forms of misfinancing; court procedure which enables utilites to appeal the decision of State regulatory bodies directly to Federal Courts; and regulatory procedure which tends toward the conception of the Public Service Commission as a court, wh ich simply waits for issues to be raised rather than as an administration body designed to provide the poeple with a positive control of their monopolistic public services."

The committee summarized its recommendations as follows :

Inasmuch as scientific standardization and publicity of accounts both for operating and for holding companies together with assurance of access to all files and papers, is a condition precedent to any attempt to regulate rates to assure adequate service, or to protect the investing public, such supervision of accounts must underlie any regulatory plan either State or Federal. This will entail:

"Revision of the present uniform classification of accounts to serve as a guide in establishing the equities of the various rates as well as of total earnings.

"Development and adoption of a technique of regulation in accordance with which public service commissions will operate as affective administrative bodies charged with safeguarding the public interest. This will include provision for the initiation by the commissions of rate changes and other constructive steps in the interests of consumers on the basis of aggressive fact finding.

"Establishment by law of the prudent investment principle of valuation as the public policy of the nation and of the states for purposes of rate control.

"Rate determination on the basis of actual cost of each class of service including a fair profit on the capital required for such service.

"Federal incorporation of holding companies with adequate control over their security issues and requirement of uniform accounting and periodic disclosure of their financial operations."*

From the results already published by the Federal Trade Commission on its investigation of "Holding Companies," the above conclusions seem to be amply justified. I have given examples of all the important faults mentioned in above report. William Z. Ripley said in the New York Times of April 10, 1932, "the time is coming, and I predict it is not very far distant, when the Federal Government will be compelled to step in and supplement the activity of the States as respects financial and accounting regulation in this field. Because so much of this business is intrastate, governmental supervision of rates and service has been predominantly local. But more and more electrical power is being transmitted across State lines. Of greater importance, however as respects Federal Control is the growth of great combinations, through holding companies, which pretty effectively dominate the light and power business of the United States. Progressively the local companies subject to State regulation as respects rates and service, have been sucked dry by the

* Round Table Conference-N. Y. State Public Service Commission-Hotel Penn. N.Y.C. April 8 & 9, 1932."Report of the Commission"

taking over at staff headquarters of basic matters of management which determine both cost and service. All this has been effected by the prodigious use of the holding company as a legal device.---

"Hundreds of millions of dollars of the people's money are now in the hands of these public utility managements. In all their accounting and financial affairs they are utterly without supervision in the common interest. This public utility situation must be handled sometime by subjection of these great interstate combinations to some form of Federal oversight.---The utility situation as a whole is sound. Its services are of basic importance to every citizen. But it is imperative, in view of what we know about certain of these combinations, that means should be afforded for separation of the sheep from the goats. The industry is absolutely incapable, as were the railroads years ago, of policing itself. Its best leaders acknowledge the existence of evils and abuses particularly in the field of finance. Only the government and in this field the Federal Government, can stop these leaks before they undermine the whole levee of utility credit. And with full acknowledgement of its merits, the holding company is accountable for some of the worst evils which obtain."

In a book "Private Property and the Corporate System" by Adolph Berle, Professor of Law of Corporation Finance at Columbia Law School, which will be published later this year, the author will show that the holding company stands foremost among the so-called legal devices for undue control of corporations.

Newton D. Baker said of the same evil. "It seems to me a most menacing and unwholesome thing if any individual or a small

group can put out bales of securities, create immense pools of other peoples money and use that money to control fundamental industries."

SECTION V

THE COMPANIES IN THE FIELD

A. Introduction

1. The **Seventeen** Principal Holding Co's. in the Elec. Light & Power Industry of the United States.
2. My Code Numbers for Public Utility Holding and Investment Companies.
3. Some Main Banking Groups.
4. The Charts from a recent Book or Holding Companies by Bonbright and Means.

B. The Main Companies in the Field.

- I Electric Bond and Share Co.
- II The United Corp. and the American Superpower Corp.
- III Harris Forbes-H.M. Byllesby-Doherty & Co.-Chase Nat'l Bank-United Founders Corp.
- IV The Insull Group
- V The North American Company
- VI The United light & Power Co.
- VII Stone & Webster Corp.
- VIII The American Water Works & Electric Co.
- X The American Commonwealth Power Corp.
- XI The International Paper and Power Co.
- XIII Goldman Sachs Trading Corp. & Aldred & Company Bankers
- XIV Southern California Edison Co.
- XV Pacific Lighting Corp.
- XVI The Federal Light & Traction Co.
- XVII The Peoples Light and Power Company
- XVIII The Pacific Gas & Electric Corp.

C. Charts and Maps.

1. Geographical Distribution of Public Utility Holding and Investment Companies in the United States.

3. Analysis of the Capitalization of Fifty Utility Companies.
4. Moody's Chart of Public Utility Intercompany Ownership.
5. Map of Sixty Operating Companies in the United States.

THE COMPANIES IN THE FIELD*

A. Introduction

We have seen how the holding company has become the dominating influence in the Electric Light and Power Field. Ten of the largest holding companies in the United States handle about seventy-five percent of all the electric light and power business of the nation. In this section I am including several charts which should supplement the data about the individual companies and in addition should give a comprehensive picture of the utility situation. In order to have the charts correlate I have worked out a system by which every holding company or holding company group is given a number in Roman Numerals and these subsidiaries are given arithmetic numerals. I will now give the system which I have followed in this report.

1. THE 17 PRINCIPAL HOLDING COMPANIES IN THE ELECTRIC LIGHT AND POWER INDUSTRY OF THE UNITED STATES

- | | |
|-----|--|
| I | The Electric Bond and Share Co. |
| II | The United Corporation and American Superpower Co. |
| III | Harris Forbes-H.M. Byllesby-H. L. Doherty Group |
| IV | The Insull Group |
| V | The North American Company |
| VI | The United Light and Power Company |
| VII | Stone and Webster Group |
| IX | American Water Works and Electric Company |
| X | American Commonwealth Power Company |

* The figures used in this section are from Moody's Manual of Public Utilities for 1931 unless it is indicated that they come from some other source.

THE UNIVERSITY OF CHICAGO

1950-1951

THE UNIVERSITY OF CHICAGO

I	The University of Chicago
II	The University of Chicago
III	The University of Chicago
IV	The University of Chicago
V	The University of Chicago
VI	The University of Chicago
VII	The University of Chicago
VIII	The University of Chicago
IX	The University of Chicago
X	The University of Chicago

- XI The International Paper & Power Co.
- XIII Goldman Sachs Trading Corporation &
 Alfred and Company, Bankers.
- XIV Southern California Edison Company
- XV Pacific Lighting Corporation
- XVI The Federal Light and Traction Co.
- XVII The Peoples Light and Power Company
- V & III The Pacific Gas & Electric Corporation

2. My Code Numbers for Public Utility Holding & Investment Companies

I Electric Bond and Share Company.

11 American Power and Light Company

12 National Power & Light Co.

13 Electric Power & Light Co.

22 American Gas & Electric Co.

23 American & Foreign Power Co.

II Bonbright, J. P. Morgan Co., Drexel & Company

2. The United Corporation

3. American Superpower Corp.

4. The United Gas Improvement Co.

6. Commonwealth and Southern Corp.

6a Commonwealth Power Company

7. Niagara Hudson Power Co.

8. Consolidated Gas Company of New York.

9. Public Service Company of New Jersey.

10. Columbia Gas & Electric Co.

III Harris Forbes, H. M. Byllesby, Doherty Company.

15. Cities Service Company.

16. Utilities Power & Light Co.

19. United Founders.

19a United States Electric Corp.

- 19 b Standard Power & Light Co.
- 19 c Standard Gas & Electric Co.
- 17 Associated Gas & Electric Co.
- 43 Eastern Utilities Investing Corp.
- 44 General Gas & Electric Corp.
- 26. Public Utility Holding Co.
- 26a Central Public Service Co.
- 32. Eastern Utilities Investing Corp.

IV The Insull Group.

- 21. Insull Investing Co.
- 21a Middle West Utilities Co.
- 29. Commonwealth Edison Co.
- 30. Peoples Gas Light & Coke Co.
- 31. Public Service Company of Northern Illinois.

V. Central States Electric Corp.

- 20. Central States Electric Corp.
- 20a The North American Co.

VI Continental Shares Group.

- 24. Continental Shares Corp.
- 24a United Light & Power Co.

VII Stone & Webster Group.

- 5. Stone & Webster, Inc.
- 5a Engineers Public Service Co.

IX W. C. Langley & Company, Bankers.

- 18 American Water Works Co.

X American Commonwealth Power Corp.

- 14 American Commonwealth Power Corp.

XI International Paper & Power System.

- 38 International Paper & Power Co.
- 38a New England Power Company
- 38b Mass. Utilities Associates.

- XIII Goldman Sachs Trading Corp. and Aldred & Company, Bankers
39 Shenandoah Corp.
40 Blue Ridge Corp.
33 Consolidated Gas, Electric, Light & Power Co., of Baltimore
41 Safe Harbor Water Power Co.
42 Pennsylvania Water Power Co.
- XIV Southern California Edison Co.
34 Southern California Edison Co.
- XV Pacific Lighting Corp.
36 Pacific Lighting Corp.
- XVI Federal Light & Traction Co.
35 Federal Light & Traction Co.
- XVII Peoples Light & Power Co.
37 Peoples Light & Power Company
- V & III Pacific Gas & Electric Co. 27
- IV & V North American Light & Power Co. 28

3. SOME MAIN BANKING GROUPS

- A. J. P. Morgan & Company; Drexel & Company; Bonbright & Co.;
National City Bank; Guaranty Trust Company.

I The Electric Bond & Share Co.

II United Corporation - American Superpower Corp.

-
- B. Chase Securities Company; Harris Forbes; Bankers Co.

III H. M. Byllesby, Harries Forbes, H. L. Doherty.

XIV Southern California Edison Co.

XI The International Paper & Power Co.

-
- C. Goldman Sachs Trading Corporation & Aldred & Co., Bankers.

XIII Consolidated Gas & Electric Light & Power Co. of
Baltimore and its affiliates.

Penn. Water Power Co. - Safe Harbor Water Power Co.

1. The first part of the report deals with the general situation of the country and the progress of the work during the year. It is divided into two main sections: the first section deals with the general situation and the second section deals with the progress of the work.

2. The second part of the report deals with the results of the work during the year. It is divided into three main sections: the first section deals with the results of the work in the field of research, the second section deals with the results of the work in the field of education, and the third section deals with the results of the work in the field of administration.

3. The third part of the report deals with the conclusions of the work during the year. It is divided into two main sections: the first section deals with the conclusions of the work in the field of research, and the second section deals with the conclusions of the work in the field of education and administration.

4. The fourth part of the report deals with the recommendations of the work during the year. It is divided into two main sections: the first section deals with the recommendations of the work in the field of research, and the second section deals with the recommendations of the work in the field of education and administration.

5. The fifth part of the report deals with the summary of the work during the year. It is divided into two main sections: the first section deals with the summary of the work in the field of research, and the second section deals with the summary of the work in the field of education and administration.

D. The Insull Utility Investments, Inc. & Corporation
Securities of Chicago.

IV The Insull Group.

E. The Continental Shares

VI The United Light & Power Co.

As Cyrus Eaton has been forced out by J. P. Morgan
& Co., we may find the latter company handling the
finances of the United Light and Power Co.

F. Stone, Webster & Blodgett

VII Stone & Webster, Inc.

G. W. C. Langley & Company

IX The American Water Works & Electric Co.

This is closely connected with the Chase National
Bank group, through United Founders Co., through
Electric Power Associates.

H. A. C. ALLYN & CO., G. E. Barret & Co. and Frederick
Pierce & Co.

X American Commonwealth Power Co.

I. Whitney & Company, New York

V North American Company

J. Bond and Goodwin & Tucker

XV Pacific Lighting Corp.

K. White Weld & Company

XVI The Federal Light & Traction Co.

XVII The Peoples Light & Power Co.

4. I will now offer two charts which appear in "The Holding Co." by Bonbright & Means which was published in April 1932. These charts give a general idea of the relative importance of the main holding companies in the field and also of the relative importance of the holding companies as a group to the independent companies.

Chart I

"Electric Gas and Traction Service Rendered by Forty Largest Public Utility Systems!"

(Exclusive of Telephone and Telegraph Companies)

(Size based on gross assets depreciated)

Type of Company Rendering Service	Proportion of National Power Output (K. W. Hrs.)	Proportion of National Gas Sales (Cu. Ft.)	Proportion of Traction Service Rendered (Passengers)
Subsidiaries of			
Pure Holding Co.	72 %	42 %	31 %
Subsidiaries of			
Operating Companies	5	2	8
Independent Operating			
Companies	12	2	18
Total for Forty Co's.	89 %	46 %	57 %
Service by other Co's.	11	54	43
Total for Nation	100 %	100 %	100 %

Chart II

"Ten Largest Good Electric Systems in the United States at End of 1930." *

(Size based on gross assets depreciated.)

* I have made slight changes in arrangement in order to make it conform to my number system.

System	Gross Assets of all Continued Businesses (in millions of dollars)	Proposition of National Power Output Produced Handled or Sold
<hr/>		
I Electric Bond and Share Group	3,683	
11. American Power & Lt. Co.		53% produced
22. American Gas & Elec. Co.		42% produced
12. National Power & Lt. Co.		35% Produced
13. Electric Power & Lt. Corp.		24% produced or purchased
II-2- United Corporation Group	6,446	
7. NiagaraHudson Power Corp.		86% Produced or purchased
6. Commonwealth & Southern Corp.		63% sold
4. United Gas Improvement Co.		45% produced
9. Public Serv. Corp. of N.J.		21% produced
10. Columbia Gas & Elec. Corp.		14% sold
8. Consolidated Gas Co. of N.Y.		55% sold
III Harris Forbes-H.M.Byllesby-		
H. L. Doherty Group	3,739	
19 c Standard & Elec.System	1,245	52% produced
17. Associated Gas & Elec.		
System	1,212	34% sold
15. Cities Service Company	1.282	19% sold
IV Insull Utility Group	2,427	
21a Middle West Utilities Co.		49% produced
29 Commonwealth Edison Co.		47% produced or purchased
31 Public Service Co. of Northern Illinois		15% produced or purchased
21a Midland United Co.		12% sold

V - 20a The North American Co	841	65% produced
V & III- 27 Pacific Gas & Electric		
Company	684	44% sold
VII - 5-Stone & Webster Corp.	626	30% produced

17,452

The above figures involve some duplication and are therefore not additive.

B. THE MAIN COMPANIES IN THE FIELD

I*

Electric Bond & Share Company

The Electric Bond and Share Company was originally formed by the General Electric Company in February 1905. Like other manufacturers of electrical equipment at the time the holding company was seen as a means of gaining control of utility properties, expanding them and thus **provide** a market for the article manufactured by the utilities. However, the company was organized to offer managerial, financial, and engineering advice to utility companies. It was therefore more successfull then any of the earlier holding companies formed either by General Electric Co., affiliated interests or by other manufacturers. The General Electric was forced to surrender its control of Elec. Bond & Share in 1924 by order of the Federal Trade Commission. It did so by giving the stock of the company to its own stockholders as a bonus.

The holding company does not own the majority of the common stock of many of its subsidiaries, but due to the indifference of stockholders to use their voting rights, due to the use of the proxy and also due to the power which the parent company wields over its subsidiaries by virtue of its service contracts, the

* These numbers refer again to my numerical system and are not section numbers.

Federal Trade Commission stated that the Electric Bond and Share Company effectively dominated its affiliated companies.

Of the Company's assets practically all are represented by security investments. Until a few months ago these were carried on the books at a value of \$904,093,646, part of this value being due to a write up on the part of the company of its holdings in American and Foreign Power Company in 1929, of \$400,000,000. In 1932 these have been written down to \$462,705,922.64, but as the market value of these securities is now \$217,957,000.00, it can easily be seen that the book values are still way out of line. In order to balance the decrease in assets the capital stock was cut down by two thirds by giving one new share for each their old shares held. If the assets were written down to their true value a much greater cut in capitalization would have been needed.

Interest in Client Holding Companies

1. American Gas and Electric

19% of its revenue is derived from the electric light and power business of its Gross Revenues its:

- a) Virginia & West Virginia properties contribute 31%.
- b) Ohio properties contribute 25%.
- c) Scranton, Pa. properties contribute 10%.
- d) Atlantic City, N. J. contribute 10%.
- e) Indiana and Michigan properties contribute 17%.

2. American Power and Light Co.

Its revenues are mainly derived from--

- a) Pacific properties 25% of the gross.
- b) Minnesota properties 8% of the gross.
- c) Florida " 14% "
- d) Idaho and Montana 13% of the gross.
- e) Kansas & Nebraska 13% of the gross.
- F) Texas -- 23% of the gross.

3. Electric Power and Light Co.

67% of its gross revenue is derived from the electric light and power field.

9% of its gross revenue " " gas light & power field.

Its revenues are mainly derived from:

a) Texas Properties 14% of the gross.

b) Montana " 26% " "

c) Louisiana and Mississippi Properties 38%.

d) United Gas Corp. 14% - all of this not included in 9% above.

4. National Power and Light Co.

74% of its gross revenue is derived from the electric light and power field.

7% of its gross " " " " gas light & Power field.

Its revenue is mainly derived from--

a) Carolina Properties 12% D) Houston, Texas 10%

B) Tennessee " 12% e) Birmingham, Alabama 12%.

c) Pennsylvania 51%

5. American and Foreign Power Co.

54% of its common stock is owned by the Electric Bond and Share Company.

80% of its \$7.00 second preferred stock

16% of its \$6.00 preferred

These holdings as are shown above are substantially larger than they were in 1930. In March 1931 the Electric Bond and Share Company purchased properties in Roumania from the government for \$200,000,000. The American and Foreign Power Company is going to handle these properties under the name of the Electric Service Corporation which will supply electric power to the whole nation.

6. Electric Bond & Share also has a minority interest in:

a) Commonwealth and Southern Corporation

b) American Superpower Corp.

The purpose of this report is to provide a comprehensive overview of the project's progress and findings.

The project was initiated in 2023 and is currently in the final stages of completion.

The following sections will discuss the project's objectives, methodology, results, and conclusions.

The project's primary objective was to develop a new system for data analysis and reporting.

The methodology employed for this project involved a combination of qualitative and quantitative research methods.

The results of the project indicate that the new system is effective and efficient.

The conclusions drawn from the project suggest that the new system is a viable solution for the organization's needs.

The project was completed on time and within budget, and the results are highly satisfactory.

The project's success is a testament to the hard work and dedication of the project team.

The project's findings will be used to inform future research and development efforts.

The project's results are presented in the following sections.

The project's findings are summarized in the following table.

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The project's findings are summarized in the following table.

The project's results are presented in the following sections.

- c) United Corporation
 - d) United Gas Corporation
7. Facts about some of the Directors of Electric Bond and Share Co.
- a) S. Z. Mitchell-Director of the American Superpower Corp.
 - b) Edwin G. Merrill-President of the Bank of New York and Trust Company.
 - c) Lewis C. Potter-Chairman of the Board of the Irving Trust Co.
 - d) William C. Potter-President of the Guaranty Trust Co. of N.Y.
 - e) Frederick Strauss-J. & W. Seligman & Co.
 - f) George H. Howard- President of the United Corp.

Statistics of Electric Bond and Share Co.

	<u>1931</u>	<u>1930</u>
Gross Earnings	\$46,953,106	\$54,387,962
Net Earnings	\$36,860,300	\$42,355,162
Percentage of National Power Output, Produced, Handled or Sold.	154%	

The Company has no Funded Debt.

II

United Corporation and The American Superpower Corp.

In this section I am placing the United Corporation and the American Superpower Corp. These two groups were mainly organized for investment purposes. Although the control of these subsidiaries is definite these two holding companies allow a good deal of freedom in the management of their subsidiaries by the local directors. Also where they control holding operating companies they are demanding that these latter make their service charges to the operating units at something approximating cost. We are finding this particularly true in the Commonwealth and Southern Corporation. The Electric Bond and Share Co. could learn something here.

The Bonbright, J. P. Morgan and Drexel and Company banking firms organized these two holding companies.

2. The United Corporation

The United Corporation was organized by these banking interests to provide a community of interest along the Atlantic Seaboard in 1929.

We have shown how with one exception the investments of the United Corp. are in companies that are primarily distributors of electric light and power. The exception is the Columbia Gas & Electric Corp., one of the largest natural gas distributing systems in the country. The United Corp. buys most of its securities as permanent investments.

Community of Interests

Besides the stock interests in its subsidiaries, I wish to point out how the board of directors of the affiliated companies have common directors. G. H. Howard, the President of the United Corporation is a director of the Public Service Corp., of New Jersey, of the United Gas Improvement Company, the Columbia Gas & Electric Corp., Commonwealth and Southern and Chairman of the executive committee of the Niagara Hudson Power Board, a trustee of Consumers Gas of New York, and a director also of the Electric Bond and Share Corp.

The so called "Carlisle" group through their control of St. Regis Paper Co., are the largest owners of the United Corp. common stock, their holding amounted to over 2,100,000 or 15% of the total stock outstanding in 1931. The Bonbright group is credited with 1,100,000 shares which the Morgan and Drexel interests are believed to own 570,000 shares. The Electric Bond and Share Co. is also credited with 250,00 shares. The American Superpower Corp. was the largest institutioned holder of its (the United Corporations) stock in 1931.

2. United Corporation: Gross Earnings, 1930 - \$16,769,709.73-
" 1931 - 19,393,000.

Net Earnings, 1930 - \$16,079,527.17-
1931 - 18,445,000.

Percentage of gross earnings for

Gas and Electricity 78%.

Total assets of Holding Co. \$2770,502,700.*

1. The Consolidated Gas Co. of New York.

Gross Operating Revenues \$238,753,050.74 (1930)

Net Earnings 69,262,169.92(1930)

This company operated in New York State, in and around New York City.

9.5 % of its common stock is owned by the United Corp.

76.5 % of its revenue is derived from its electric light and power
business.

23.3 % of its revenue is derived from its gas business.

2. The United Gas Improvement Company.

Gross Revenue, (1930) \$36,178,286.

Net Revenue, (1930) 32,810,744.

This company itself is essentially a holding company, control-
ling Philadelphia Electric Company and Connecticut Electric Service
Co. 27% of its common stock is owned by the United Corp.

75% of its revenue is derived from the electric light and power
business.

18% of its revenue is derived from the gas light and power business.

A. Its Pennsylvania Properties yield 71% of its gross revenues.

B. Its New England Properties yield 21% of its gross revenues.

Other Investments in companies other than Subsidiaries, of which
the more important common stock holdings were as follows:-

<u>Company</u>	<u>Common Shares</u>
American Superpower Corp. (of Delaware), The	100,000

* Market Value as of Jan. 1, 1932 - Cost 592,821,748.

U.S. AIR FORCE 10721

<u>Company</u>	<u>Common Shares</u>
Commonwealth & Southern Corp., The	975,446-73/80
Connecticut Railway & Lighting Co.	39,046
Hartford Gas Company, The	16,886
Manchester Gas Company	4,200
Midland United Company	530,716-59/200
Niagara Hudson Power Corporation	1,930,323-2/3
Public Service Corporation of New Jersey	1,987,090

With United Corporation it controls (54.1 % of the company's stock) Public Service Co., of N. J., the latter accounting for 18.6 % and United Gas Improvement accounting for 36. %

The United Gas Improvement also owns 17 % of the stock of the Midland United Company which is under the control of the Middle West Utilities Company.

3. Public Service Company of New Jersey.

Gross Revenue (1930) - \$138,161,946.59

Net Income (1930) - 30,103,302.03

18 % of its common stock is owned by United Corp.

34 % of its common stock is owned by United Gas Improvement.

47 % of its gross revenue is derived from its electric light and power business.

22 % of its gross revenue is derived from its gas business.

31 % of its gross revenue is derived from its transportation business.

It controls Public Service Electric and Gas Co., of N. J. and Public Service Coordinated T. R. ' P. T.

4. Commonwealth and Southern Corp.

Gross Revenue (1930) \$147,247,919.90

Net Income (1930) 40,038,212.65

It now controls Commonwealth Power Company.

6% of its common stock is owned by United Corp.

3% of its common stock is owned by United Gas Improvement Co.

71% of its gross revenue is derived from its electric light
and power business.

9% of its gross revenue is derived from its gas business.

Of its gross revenues:

Southern Properties contribute 45%

Michigan Properties contribute 24%

Ohio and Pennsylvania Properties contribute 19%

Illinois and Indiana Properties contribute 12%

5. Niagara Hudson Power Corp.

Gross Revenue	(1930)	\$78,833,540.27
---------------	--------	-----------------

Net Income	(1930)	15,558,345.33
------------	--------	---------------

6.5 % of its common stock is owned by United Corp.

7.5 % of its common stock is owned by United Gas Improvement Co.

85 % of its gross revenues are derived from its electric light
and power business.

11 % of its gross revenues are derived from its gas business.

Of its gross revenues, its

Buffalo Niagra and Eastern Co. Properties contribute 46 %

Mowhawk and Hudson Properties contribute 48 %

Up until this year it had a substantial interest in St. Regis Paper
Company, but it exchanged this for United Corporations Stock,

6. The Columbia Gas and Electric Co. *

25% of the Common Stock is owned by United Corporation.

27% of its gross revenues is derived from its electric light
and power business.

70% of its gross revenues is derived from its gas business.

* This Company controls operating companies serving Dayton and
Cincinnati, Ohio; and Covington and Newport, Ky. It is one of the
smaller companies of the group. -175-

By its control of the above companies, the United Corporation controls a network of properties covering all of the Eastern States. United Corp. in 1930 had assets of \$750,000,000; These having increased 600,000 in a year and a half. No doubt it will further more interconnection of power lines.

3. The American Superpower Corporation

The Company was chartered in 1923 and in 1929 was merged with Utility Shares Corp.

This company is mainly interested in Commonwealth and Southern Corp., owning 18% of the latter's common stock. It also has minority interests in Electric Bond and Share Company, Consolidated Gas Co., of N. Y., and Niagara Hudson Power Corporation; and United Light and Power Co. and National Power and Light Co.

Principal Holdings of the American Superpower Corp.

The Commonwealth & Southern Corp.

The United Corp.

Electric Bond & Share Co.

Consolidated Gas Co., of New York.

United Light & Power Co.

Niagara Hudson Power Co.

National Power & Light Co.

Brazilian Traction, Light & Power Co., Ltd.

Associated Telephone Utilities Co.

Electric Power & Light Corp.

American Gas & Electric Co.

Italian Superpower Corp.

American Power & Light Co.

It also has minor holdings in several other companies.

On January 6, 1931, the Assets of the Corporation had a market value of \$153,915,046.58.

The American Superpower Corp. showed a (large) drop in earnings in 1931 over 1930 of over three million dollars. As profits on the sales of securities and commissions were ^{only} \$16,748.00 in 1931 and \$2,581,247 in 1930, we see that this accounted for a large part of the decrease.

Facts about some of the Directors of;-

1. United Corporation.

- (a) F. L. Carlisle of St. Regis Paper Co.
- (b) B. C. Cobb - Chairman of the Board of Commonwealth and Southern, Director of American Superpower Corp.
- (c) Phillip G. Gosslin - Columbia Gas and Electric Co.
- (d) George H. Howard - President of the Co. - Director, Electric Bond & Share Co.
- (e) Alfred L. Loomis - Bonbright & Co. - Director of American Superpower Corp.
- (f) Thomas N. McCarter - Pres. Public Service of N. J. - Director, American Superpower Corp.
- (g) Harold Stanley - J. P. Morgan & Co.
- (h) Lond K. Thorne - Bonbright & Co. - Director American Superpower Corp.
- (i) George Whitney - J. P. Morgan & Co.
- (j) John E. Zimmermann - United Gas Improvement Co.

2. American Superpower Corp.

- (a) B. C. Cobb - Chairman of the Board, Commonwealth & Southern, Director of United Corp.
- (b) George E. Hardy - Director, Electric Bond & Share Co.
- (c) A. L. Loomis - Chairman of the Board, Director of United Corp.; member Bonbright & Co.
- (d) T. B. Maccauley - Pres. Sun Life Insurance Co.
- (e) Thomas N. McCarthy - President Public Service Corp. of N.J. Director of United Corp.

- (f) Sidney Z. Mitchell - Chairman of the Board of Electric Bond & Share Co.
- (g) George Roberts - Director of United Light & Power Co.
- (h) H. S. Scarrett - Vice President of Bonbright & Co.
- (i) Richard Schaddelle - Chairman of Executive Committee of the United Light and Power Co.
- (j) Roy B. Stevens - American Electric Power Corp.
- (k) Francis B. Thorne - Brother of L. K. Thorne, President of Bonbright & Co.
- (l) London K. Thorne - President of Bonbright & Co.
Director of United Corp.
- (m) Percy S. Young - Vice President Public Service Corp. of N. J.

American Superpower Corp.

Total Assets Cost \$134,575,399.89 *

Total Gross Income for 1930 . . . 8,725,973.22 for '31-\$5,591,212.

Total Net Income for 1930 8,213,474.25 " 5,444,462.

The Company has no funded debt.

United Corporation

Total Assets: Cost \$592,821,748.00 **

Total Gross Income for 1930 . . 16,731,329.56 for 1931-19,393,000.

Total Net Income for 1930 . . . 16,079,527.17 " " 18,445,000.

III

HARRIS FORBES - H. M. BYLLESBY

DOHERTY & COMPANY & CHASE NATIONAL BANK

United Founders which control United States Electric Power which controls Standard Power and Light Co., which in turn controls:-

19C- Standard Gas and Electric Co.

* Market Value as of Jan. 1, 1932 - \$85,844,627.00

** " " " " -\$269,405,995.00

(1) General - The Board of Directors of the Company

and the Board of Directors

(2) General - The Board of Directors of the Company

(3) General - The Board of Directors of the Company

(4) General - The Board of Directors of the Company

The Board of Directors of the Company

(5) General - The Board of Directors of the Company

(6) General - The Board of Directors of the Company

The Board of Directors of the Company

(7) General - The Board of Directors of the Company

The Board of Directors of the Company

(8) General - The Board of Directors of the Company

General Information

Total Assets as of 12/31/1911

Total Liabilities as of 12/31/1911

Total Equity as of 12/31/1911

The Company has no fixed assets

Financial Condition

Total Assets as of 12/31/1911

Total Liabilities as of 12/31/1911

Total Equity as of 12/31/1911

III

General Information - The Board of Directors

The Board of Directors of the Company

Total Assets as of 12/31/1911

Total Liabilities as of 12/31/1911

Total Equity as of 12/31/1911

Total Assets as of 12/31/1911

Total Liabilities as of 12/31/1911

It is an operating, managing and engineering company, a subsidiary of H. H. Byllesby & Co. It was chartered in 1910.

75% of its gross revenue is derived from the electric light and and power business. An onput of 4,594,752,028 KWH is in 1930.

12% of its gross revenue is derived from its gas business.

It serves 21 states and 1630 communities.

It has a funded debt of \$74,000,000. and Subsidiaries a Funded debt of \$419,913,595.00.

Of its gross revenue, its

California Properties contribute	12 %
Colorado " " 	3 %
Louisville " " 	7 %
Northern " " 	23 %
Northern States Power Properties contribute . . .	19 %
Pittsburg Properties contribute	15 %
Oklahoma Properties contribute	8 %
Deep Rock Oil Properties contribute	11 %

Total Assets of the System are 1,245,000,000.

Net Earnings 1931 - \$18,736,000, 1930 14,307,800*

17- Associated Gas and Electric

The Company was chartered in 1906 but grew very slowly until it was taken over by the present management in 1931. Since then it has grown very rapidly. Too rapidly.

90.5 % of its gross revenues is derived from gas and electricity sales.

One in every 32 residential gas consumers in the United States served by this system.

One in every 27 residential electric consumers in the United States served by this system.

* But on a per share basis 1931 - 4.55, against 1930 of 5.79

The Company has a funded debt of 291,971,545 or if one half its total capitalization. The entire voting control of the company in a small amount of Class B. stock, closely held by the management. It is the most complex financial set up of any company in the world.

Serves 5,700,000 customers in 26 states, the Canadian Mountain Provinces and the Phillipine Islands.

Gross Earnings of System for 1930-104,531,922.-1931-104,590,030

Net Earnings for 1930- \$41,478,112 - 1931 - 38,989,813*

* After taxes & Depreciation-Before interest, pfd.div. of underlying cos.

Total power output in M or KWH is for 1930 - 471,476

16- Utilities Power and Light Co.

72 % of its gross revenue is derived from its electric light and power business.

23 % of its gross revenue is derived from its gas business.

Net Income for 1930 . . . \$7,236,840. - 1931 \$4,500,000*

" " Rev. Share 1930 - \$4.08 - 1931 - \$2.00

This corporation spent \$30,000,000 for new construction last eighteen months in United States, Canada & Great Britain.

* Partly estimated for returns on English subsidiaries not all in.

15- Cities Service Co.

It was incorporated in Delaware in 1910.

Gross Earnings - 1930-\$57,437,422 - 1931 - \$37,116,421

Net Earnings - 1930-\$37,264,594 - 1931 - \$15,543,972 *

About 40 % of the company's earnings came from its public utility operations and 60% from its oil operations.

* Or equal to \$1.25 per com. share in 1931 and 464 per share of com.

Electric PropertiesGas Properties

Kilowatt Hours Sold 1,483,589.000

Sales in Cubic Feet
139,778,772,000

Kilowatt Installed Capacity 577,000

Number of Gas Wells 1,992

Number of Customers 416,422

Number of Customers 508,316

Population Served (1930) 1,700,000

Population Served (1930)
3,190,0005. Public Utility Holding Co. which in turn controlsCentral Public Service Corp.

28% of its gross revenues is derived from the electric light and power business.

63% of its gross revenues is derived from its gas business.

Of its gross revenue its

A. Canadian & Maine Properties contribute	4%
B. Maryland & Penn. " "	2%
C. Middle West " "	39%
D. Pacific Northwest " "	48%
E. New York City " "	8%

International Utilities Investment Corporation is also controlled by this group.

Standard Gas and Electric Company gives us a good example of pyramiding. By an investment of \$5,000,000 in the Class B stock of Northern States Power Co., of Delaware and of \$2,000,000 of preferred stock of the Northern States Power Co., of Wisconsin, it controls an investment of \$200,000,000.

The acquisition of control of U. S. Electric Power Corp., brought within the control of United Founders Corp., jointly with H. M. Byllesby & Co., Standard Power & Light and through it the Standard Gas and Electric System. United Founders Corp. is represented on the board of United States Electric Power Corp., by six directors. The other directors represent banking houses identified with the formation of the company and include Hydro

Electric Securities Corp., Albert Emanuel Co.; W. C. Langly & Co., A. C. Allyn & Co., Harris Forbes & Co., Chase National Bank, through the Seaboard National Corp., J. Henry Schoder Banking Corp., and the Koppers Co. of Pittsburgh.

Total Resources of the United States Electric Power Corp., \$1,221,536,005.18. During the year 1930 realized loans of American Founders Corp. were \$11,373,318.44.

United Founders Company:-

Gross Income 1930 \$18,688,217.04

Net Income 1930 \$12,835,450.76

THE INSULL GROUP

1V

The Insull Group controls most of their properties through personal holdings of the various investing companies. It has assets of 2½ billion.

1. Middle West Utilities Company	(Gross Income 1930 - \$24,142,643.05
	(Net Income 1930 - 19,160,617.91
	" " 1931 - 14,134,000.00*
	*Estimated by Samuel Insull

This is the largest and most important member of the group.

71.6 % of its gross revenue is derived from the electric light and power business.

8.1 % of its gross revenue is derived from its gas business.

Of Its gross revenue, its,

A. New England Public Service Co. contributes . . .	13 %
B. National Public Service Co. " . . .	20 %
C. Illinois Properties contribute	13 %
D. Texas Properties "	14 %
E. Miscellaneous Properties "	40 %

2. Peoples Gas Light & Coke Co.	(Gross Income 1930-\$35,969,186.51
	" " 1931- 33,738,058.00
	(Net " 1930- 6,687,842.12
	" " 1931- 6,798,935.00

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This company is mainly engaged in supplying Chicago with gas.

	(Gross Revenue-1930-	\$84,004,438.48
	(" " 1931	80,551,164.00
3. Commonwealth Edison Co.	(Net Income -1930	16,402,588.24
	(" " 1931	16,322,541.00

This company's main business is supply Chicago with electricity.

Sales to Chicago consumers 4,191,296,000 K. W. Hr. in 1930.

4. Public Service Corporation of Northern Illinois.

This company supplies electricity to the suburbs of Chicago.

Gross Earnings	- 1930	- \$35,405,093.65
" "	- 1931	- 35,916,019.00
Net Income	- 1930	- 7,564,046.44
" "	- 1931	- 7,589,784.00

	(Gross Earnings-1930-	\$24,142,643.05
	(" " 1931	22,142,643.05
5. The Middle West Utilities Co.	(Net Income -1930-	19,160,617.91
	(" " -1931-	14,134,000.00

Net earnings for the system were up 14.7 % over 1929 due to increased domestic sales.

The Middle West Utilities System was founded in 1912 with 100,000 customers. In 1930 served 1,727,445 customers and 4,741 communities. It operates companies in 30 states serving districts having a population of 6,203,846. The total output of the system was 4,300,000,000 K.W. for the year 1930 and the total generating capacity of its stations is 1,486,589. K.W.

The Middle West Utilities Co., is a holding investment company. It was organized to raise capital for the construction of widespread electric power systems to provide an adequate and economical service to small communities. It has consolidated the power requirements of hundreds of towns and has correlated the varied times at which their maximum demands for power were made. In this way the total reserve power was much less than would be the total reserves of many small independent companies each operating in only one of

1. The first section of the report deals with the general situation of the country and the progress of the work during the year.

2. The second section deals with the results of the work done during the year.

3. The third section deals with the results of the work done during the year.

4. The fourth section deals with the results of the work done during the year.

5. The fifth section deals with the results of the work done during the year.

6. The sixth section deals with the results of the work done during the year.

7. The seventh section deals with the results of the work done during the year.

8. The eighth section deals with the results of the work done during the year.

9. The ninth section deals with the results of the work done during the year.

10. The tenth section deals with the results of the work done during the year.

11. The eleventh section deals with the results of the work done during the year.

12. The twelfth section deals with the results of the work done during the year.

13. The thirteenth section deals with the results of the work done during the year.

14. The fourteenth section deals with the results of the work done during the year.

15. The fifteenth section deals with the results of the work done during the year.

16. The sixteenth section deals with the results of the work done during the year.

17. The seventeenth section deals with the results of the work done during the year.

18. The eighteenth section deals with the results of the work done during the year.

19. The nineteenth section deals with the results of the work done during the year.

20. The twentieth section deals with the results of the work done during the year.

21. The twenty-first section deals with the results of the work done during the year.

22. The twenty-second section deals with the results of the work done during the year.

23. The twenty-third section deals with the results of the work done during the year.

these districts. It has been mainly interested in securing equity capital which small companies often find it so hard to obtain at reasonable prices.

This group of Insull companies has recently gone into a receivership, the largest bankruptcy this nation has every known. It is discussed in a later section. The Insull group would seem to have greatly overexpanded as have so many of the large holding companies.

THE NORTH AMERICAN COMPANY

V

This is one of the largest and oldest independent groups founded in 1890 of operating companies in the United States. Its assets aggregate around \$841,000,000.

Its gross revenue was \$133,751,381 in 1930 & \$117,921,860 in 1931

Its net 49,638,768 " " 41,622,942 " " *

74 % of its gross revenue is derived from its electric light and power business.

4 % of its gross revenue is derived from its gas business.

It operates companies in Cleveland, Ohio, Wisconsin, St. Louis, Missouri, Washington, D. C., Illinois, Iowa, and Michigan.

1. Detroit Edison Company

25% of the common stock is owned by the North American Co.

94% of its gross revenues is derived from the electric light and power business.

1 % of its gross revenues is derived from the gas business.

This company, like the Electric Bond & Share Co., pays its dividends in stock. The dividend is 2½% for each quarter. In this way dividends are used for the expansion purposes which every progressive company in the field must meet. A stockholder owning

* This was equivalent to \$4.36 per share of common in 1930 & \$3.29 in 1931

100 shares in 1923 would have 200 shares in 1930.

It operates the following other companies, North American Edison Co., Cleveland Electric Illuminating Co., Milwaukee Electric R. U. L. & Light Co., Union Electric Light & Power Co., and Washington R. W. & Electric Co.

20% of the common stock of the North American Co., is held by the Central States Electric Corporation which really controls the policies of the company.

The territory of its subsidiaries have a population of 4,910,000 and include 687 communities.

The total capacity of its subsidiaries making up the system, 1,551,469 K.W.

The total electric output for the year 1930 was 4,926,745.14 K.W.H.

THE UNITED LIGHT & POWER COMPANY

VI

The United Light and Power Co., is controlled by the Continental Shares. This group was dominated by Cyrus Eaton. However, he was forced out of this group by the Morgan interests as a side issue to a campaign they were waging to oust him from the steel industry. They were successful in this. Whether they will be interested enough in the United Light & Power Co., to operate and control it is a debatable question.

38% of its common stock is owned by Continental Shares.

40% of its gross revenues is derived from the electric light and power business.

38% of its gross revenues is derived from the gas business.

8% " " " " " " Transportation business.

6% of " " " " " " coke business.

8% " " " " " " miscellaneous business.

1. American Light and Traction Company.

52% of its common stock is owned by United Light & Power Co., through the United Railways.

It contributes 49% to the (100%) gross revenue of United Light & Power Co.

12% of its gross revenue comes from the electric light and power bus.

69% " " " " " " " gas business.

19% " " " " " " " miscellaneous business.

Its main properties are located in Ohio, Texas, Iowa and Missouri.

Gross Revenue-1930-\$88,393,702.00 - 1931-\$83,206,657.00*

Net Earnings -1930 13,723,044.00 - " - 11,177,934.00

* Earnings per share in 1930-\$1.21-in 1931 \$2.01, after eliminating intercompany transfer.

During the year 1930 the United Light & Power Co., sold 184,961 shares of Class A common stock of which 180,000 shares went to the Koppers Co., pursuant to an option received by that company at the time of the purchase in 1928 of that company's holdings in American Light & Traction Co., by the United Light & Power Co. The remaining shares, 4,961 were exchanged for common stock of the Continental Gas & Electric Corporation.

STONE & WEBSTER CORPORATION

VII

Stone & Webster, Inc., is a holding Co.

Stone & Webster Engineering Corp., is owned by Stone & Webster, Inc. and supervises the engineering and construction business of the latter.

Stone, Webster and Blodgett is two-thirds owned by Stone & Webster, Inc., and supervises the financing of the latter's companies.

1. Engineers Public Service Co.	(Gross Earnings(1930)	\$52,509,294.00
(" " (1931)	59,522,087.00	
(Net " (1930)	16,121,290.00	
(" " (1931)	not comparable	
due to capital readjustments.		

91 % of its common stock is owned by Stone & Webster, Inc.

\$37,128,916.32=69 % of its gross revenues is derived from its electric light and power business.

\$1,684,227.95=3% of its gross revenue is derived from its gas business.

\$10,519,848.48 = 22% of its gross revenue is derived from its transportation business.

6% of its gross revenue is derived from its miscellaneous business.

Of its gross revenue, its

A. Virginia Electric & Power Company contributes 34%.

B. George Properties contribute 4%.

C. Nebraska Properties contribute 3%

D. Texas and Louisiana properties contribute . 26%.

E. Puget Sound Properties contribute 30%

New England Properties are mainly in Northern Rhode Island and Eastern Massachusetts.

A. Eastern Utilities Associates B. Haverhill Gas Light Company

C. Fall River Gas Company

Texas Properties:-

A. Galveston

B. Houston Electric Co.

C. Northern Texas Electric

Pacific Properties:-

Sierra Pacific Co.

Florida Properties:-

Tampa Electric Co.

The Engineers Public Service Co., served 388,954 electric and 32,861 gas customers in 1930. The generating capacity of the system was 673,412 K.W. The total output was 2,082,926,625 K.W. of which 238,865,000 was purchased.

AMERICAN WATER WORKS AND ELECTRIC

IX

This is another independent group. It is closely related to W. C. Langley & Co., which handles its financing. The United Founders group is also interested in this company.

55% of its gross revenues are derived from its electric light and power business.

25% of its gross revenues are derived from its water properties.

2% of its gross revenues are derived from its gas business.

The West Pennsylvania Electric Company.

It contributes 75% of the gross revenue of American Water Works Co., and operates in Pennsylvania, West Virginia and Maryland.

American Water Works Gross Income	(1930)	\$54,066,878.54
	(1931)	49,931,729.00
" " " Net "	(1930)	6,623,646.73
	(1931)	6,104,194.00

Earned per share of com.-1930-\$3.10 - 1931-\$2.80.

American Water Works Total Generating capacity 514,914 K.W.

Number of electric customers 284,734

The stockholders of American Water Works owning a majority of the common stock entered into a Voting Trust Agreement in 1930, with Mr. H. H. Potter, Mr. Chester Dale and Mr. W. L. Cumings as voting trustees. The agreement is to continue five years and the right to deposit stock under it was extended to all common stockholders. It was created to insure the continuance of the present management and its powers are limited to the election of directors and to matters pertaining directly to the management of the corporation. All the other powers normally vested with common stockholders will be exercised by these trustees, but only at the wishes of the firm.

THE AMERICAN COMMONWEALTH POWER CORPORATION*

X

This is another of the three large independent groups. The President of the Company is Mr. F. T. Hulsuit.

The net earnings of the American Commonwealth Power Corp., for year ending January 1931 were \$4,848,389.

Earned per share of common to Sept.1930-\$1.69 and to Sept.1931-.66

22% of its gross revenues are derived from its electric light and power business

Of its gross revenues its:

New England properties contribute	6%
Lake Region Properties contribute	4%
Northwestern " "	19%
Southern properties contribute	45%
Canadian properties contribute	8%

This company was incorporated in 1927. It furnishes utility service, through its entire system, to 460,300 customers living in 400 communities located in 26 states of the United States and 112 Communities in the Provinces of Alberta, Saskatchewan and British Columbia in the Dominion of Canada. The population of the territories served is 2,850,000.

This company is another one of those that pay its dividends in common stock. This is a good policy for most companies in the industry for it leases the funds in the company. If the company is efficiently managed and these funds are wisely spent for expansion purposes, the stockholders benefit and also the Federal laws exempt this type of dividend from tax charges.

*The Company went into receivership in January 1932 as described in a later section.

INTERNATIONAL PAPER & POWER COMPANY

XI

The International Paper & Power Co., was organized as a Massachusetts Trust Nov. 1, 1928. Under their agreement stockholders of the International Paper Co., exchanged their stock for stock in the International Paper & Power Co. Also the parent company now controls the International Hydro Electric Co., and four smaller companies, New England Power Association, Fish River Power & Storage Co., International Power & Paper Company of Newfoundland, and the International Paper Sales Co.

The New England Power Association has been undergoing an examination in Washington, but nothing very harmful to the company has been done by it and no doubt it will all blow over by next year.

International Paper and Power Co.

74% of the gross revenues are derived from its electric light and power business.

6% of its gross revenues are derived from its gas business. Of its total revenues (International Paper & Power Co.):

1. New England Power Association contributes 80%:-

Gross earnings (1930)-\$41,220,785. (1931)-\$55,647,816.

Net " " 16,789,914. " 21,064,460.

" per share 1930 - \$4.57 1931 - \$.3.35

74% of its gross revenues are derived from its electric light and power business.

It serves all of the New England States except Maine.

A. Massachusetts Utilities Associates:-

74% of its gross revenues are derived from its electric light and power business.

26% of its gross revenues are derived from its gas business.

2. Canadian Hydro Electric Company contributes 14% of its gross revenue.

The net revenue of this company for the 12 months ending Jan. 31, 1931, was \$2,000,025 as compared with \$1,036,017 for the corresponding period of the year before.

Of the total assets of the International Paper & Power Co., over 62% or \$410,610,283 represent power and utility properties and investments.

The company had trouble concerning its newspaper holdings and so they have now disposed of practically all of them.

GOLDMAN SACHS TRADING CORP. XIII

ALDRED AND COMPANY BANKERS AND AFFILIATES.

Aldred and Company is a banking group that is interested in several large public utility operating companies.

1. Consolidated Gas of Baltimore.

63% of its gross revenue is derived from its electric light and power business.

2. Pennsylvania Water Power Co.

100% of its gross revenue is derived from its electric light and power business.

3. Montreal Light Heat & Power Co.

A minority interest held by Aldred & Co. This company operates in and around Montreal, Canada.

4. Shawinigan Water & Power Co.

This company operates in Northern Vermont and in and along the St. Lawrence River and in Canada north of Montreal along this river.

SOUTHERN CALIFORNIA EDISON COMPANY XIV

This is one of the large independent operating companies in the United States. It has quite a large amount of invested capital;

common stock \$49,235,175; preferred stock, \$87,941,325. It has a funded debt of \$134,971,700.

It operates in the southern part of the state of California.

It is strictly an electric light and power company for all, 100% of its gross revenues are derived from the electric light and power business.

PACIFIC LIGHT CORPORATION

XV

This company operates in and around Los Angeles. It is a fairly large company, but as it is mainly a gas company, it is not of much importance in this study of electric companies.

16% of its gross revenues are derived from its electric light and power business.

84% of its gross revenues are derived from its gas business.

THE FEDERAL LIGHT AND TRACTION COMPANY

XVI

This is another of the smaller holding companies. It controls the Springfield Gas & Electric Co., of Missouri; the Central Arkansas Public Service Corporation operating in Arkansas and Louisiana; the Seridan County Electric Co., and the Robbins Electric Light & Fuel Co. of Wyoming; several small companies in Colorado and New Mexico; The Tuscon Gas, Electric Light & Power Co., of Arizona; and three small companies in Washington.

THE PEOPLES LIGHT AND POWER COMPANY

XVII

This is a small independent group having control of a few operating companies in various states. It controls the Green Mountain Power Co., of Vermont and New Hampshire; the Central Power & Light Co., of Arkansas; the Western States Utilities Co., of Idaho; the Arizona Edison Co., of Arizona; the Peoples

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California Hydro-Electric Corporation of California; and the Peoples West Coast Hydro Electric Corporation of Washington.

I should think that a consolidation of the Peoples Light & Power Co., and the Federal Light & Traction Co., would be advantageous for both companies. They operate electric companies in many of the same states and by a consolidation, much overhead expense could be saved and also in some instances there could be an interconnection of power lines of the two companies.

THE PACIFIC GAS AND ELECTRIC CORPORATION

V & III

This Pacific Gas & Electric Corporation and the North American Light and Power Co., are owned by these two groups V The North American Co., and III the A. M. Byllesby Corp.

32% of the common stock of Pacific Gas & Electric Corp., is owned by the North American Co.

6.3% of the common stock is owned by the Standard Gas & Electric Co. (III)

65% of its gross revenue is derived from its electric light and power business.

32% of its gross revenue is derived from its gas business.

The North American Light & Power Co., is jointly owned by Standard Gas & Electric Co., and the Middle West Utilities. Together they hold 86 % of the common stock of the company.

53% of its gross revenue is derived from its electric light and power business.

15% of its gross revenue is derived from its gas business.

C CHARTS AND MAPS.

1. Geographical Distribution of Public Utility Holding and Investment Companies in the United States.
2. Public Utility Holding and Investment Companies in the United States - by Robert A. Burwus.

3. Analysis of the Capitalization of Fifty Utility Companies.
4. Moody's Chart of Public Utility Intercorporate ownership
5. Map of Sixty Operating Companies in the United States.

1. Report of the Commission of the United States
2. Report of the Commission of the United States
3. Report of the Commission of the United States

Chart 1.

Geographical Distribution of
Public Utility Holding and
Investment Companies in the
United States

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THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

LABORATORY OF ORGANIC CHEMISTRY

CHICAGO, ILL.

CHART 2

Public Utility Holding and Investment Companies in the United States.

Chapter 2.
Introduction to the study of the
history of the United States
and the world.
The study of history is the study of the past.
It is the study of the events that have shaped the world we live in today.

Inter-Relation of Principal Public Utility Holding and Investment Companies

(January 1, 1931)

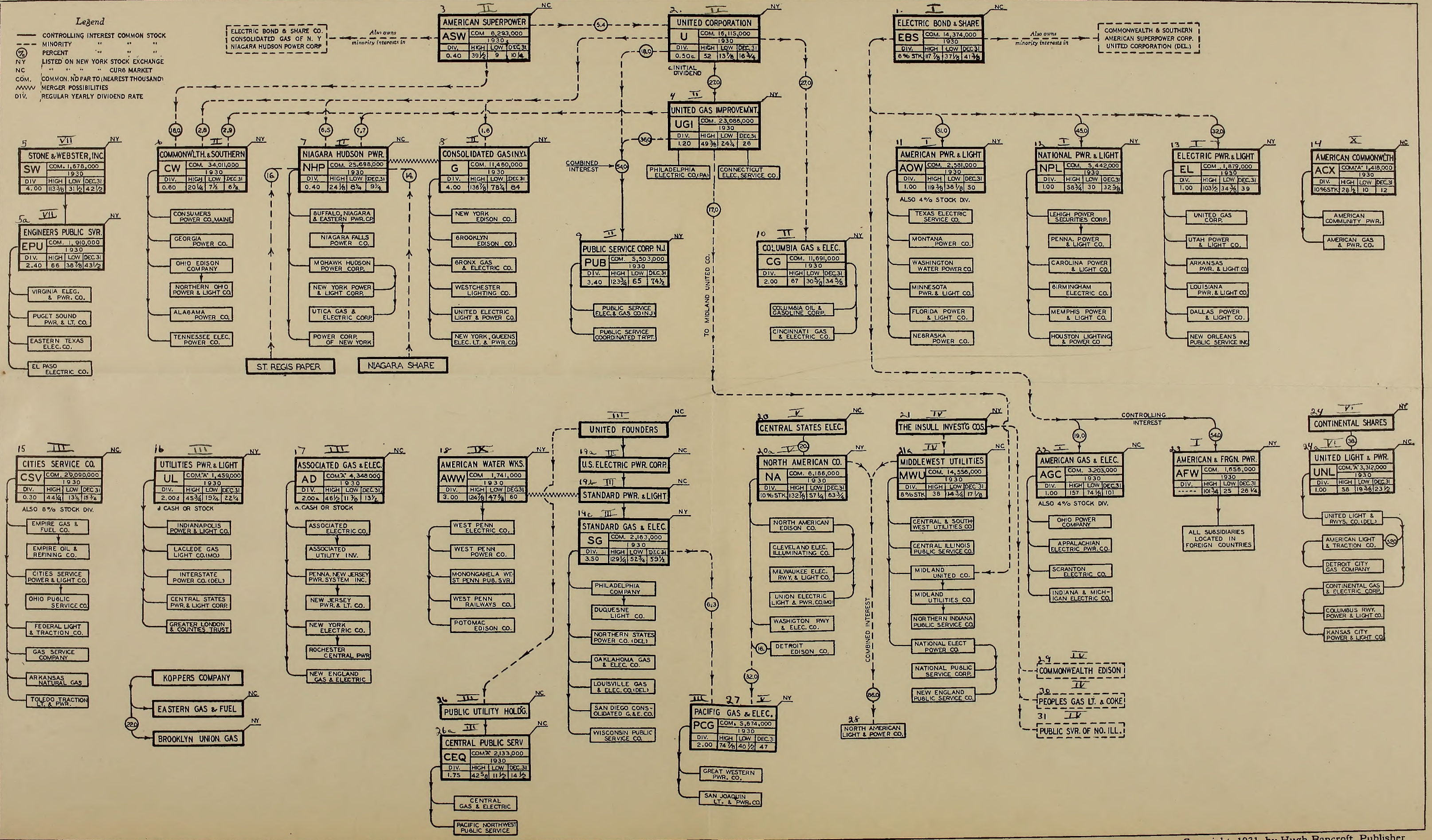
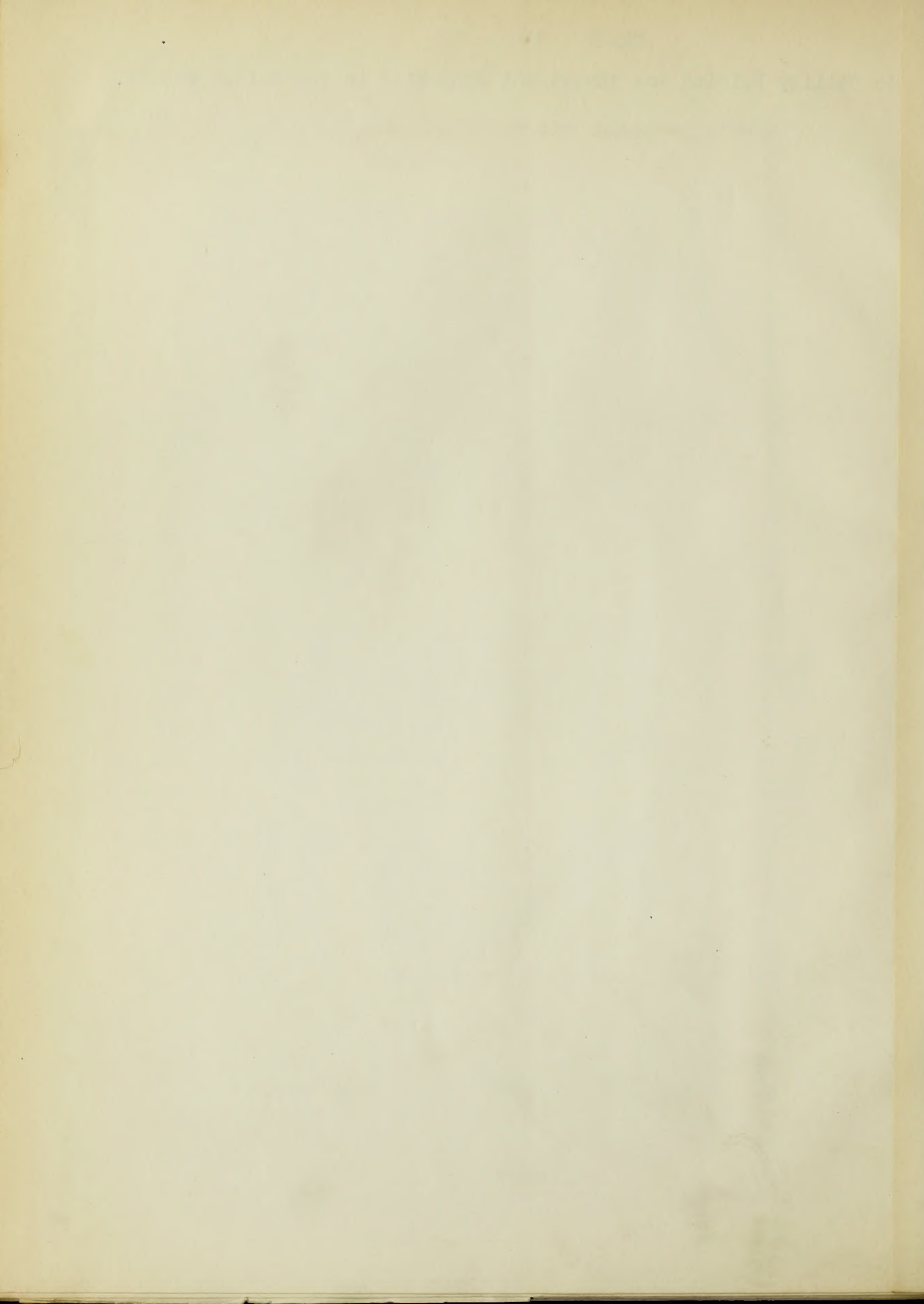




CHART 3

Analysis of the Capitalization of
47 - public utility companies

as



ANALYSIS OF CAPITALIZATION OF 47 PUBLIC UTILITIES COMPANIES

Operating Ratios Average

Electric Steam 55% " Hydro 40% " Purchase 60%	Total Capitalization			
	I % Funded Debt & Pfd. (Parent and subs.)	II Operat- ing Ratios	III Minority Interest	IV. Common & Surplus
1. American Gas & Electric	67 %	66.05	16 %	17 %
2. " Light & Traction	45	52.55		55
3. " Power " Light	86			14
4. " Water Works	77	51.45		23
5. Cleveland Electric Ill.	58	51.8		42
6. Columbia Gas & Electric	53	77.07		47
7. Commonwealth Edison	39	62.68		61
8. Commonwealth & Southern	79	50.2		21
9. Consolidated Gas of Balti- more	62	59.83		38
10. Consolidated Gas of N.Y.	35	61.03		65
11. Detroit Edison Company	43	54.45		57
12. Duke Power Company	39	50.9		61
13. Electric Power & Light	76	53.90		24
14. Engineers Public Service	77	58.63		23
15. Stone & Webster				
16. International Hydro Elec.	81	52.20	4	15
17. N.E. Power Associates	75	58.20	3	22
18. Louisville Gas & Elec.	80	48.40		20
19. Mass. Utilities Associates	66	70.25	3	31
20. Middle West Utilities		58.13		
21. National Power & Light	70	56.3	1	29
22. Niagara Hudson	58			42
23. North American Company	75	53.33	2	23
24. Pacific Gas & Elec. Co.	72	52.75		28

Chart 3
Continued

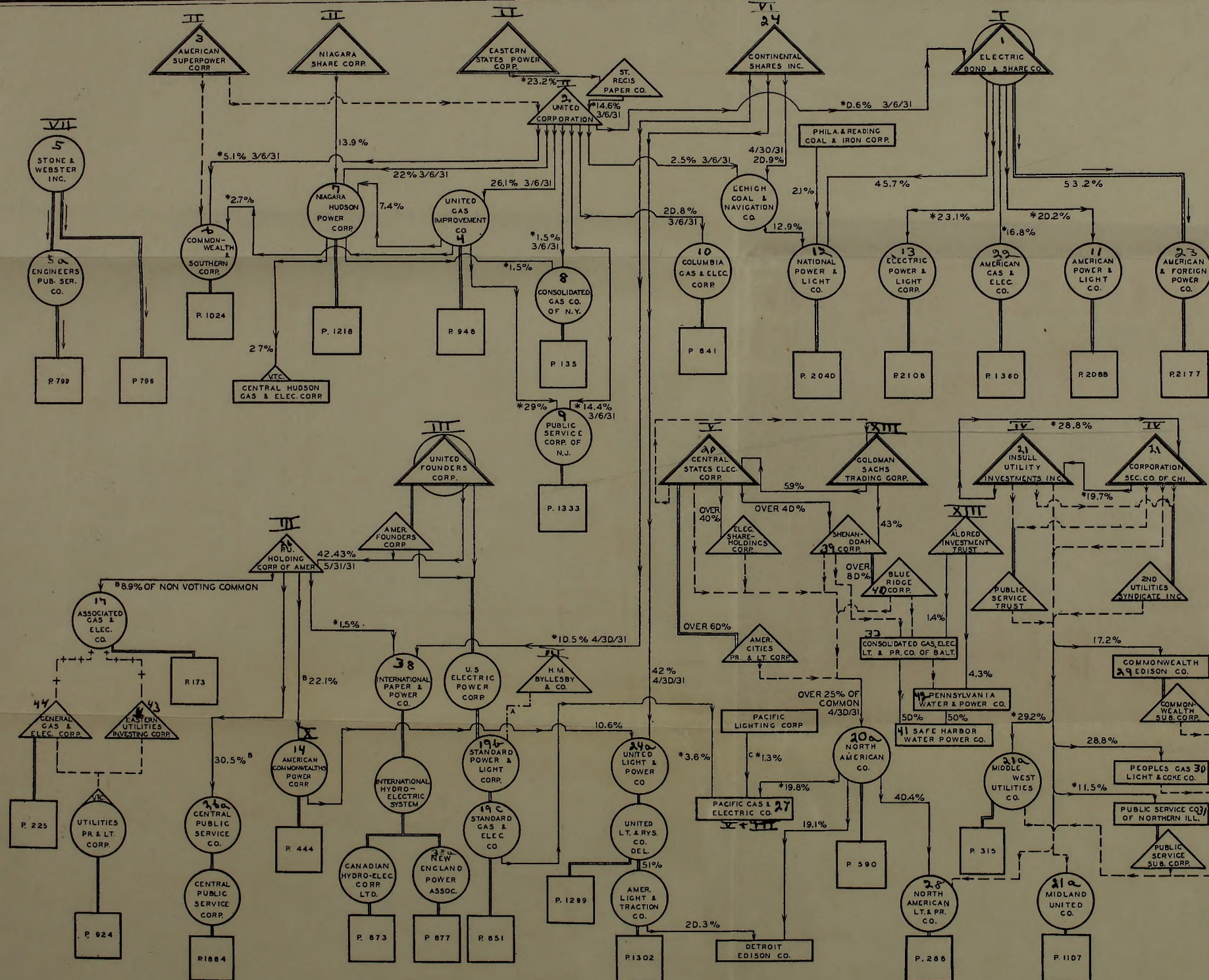
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	I	II	III	IV
	<u>% Funded Debt & Pfd. (Parent and subs.)</u>	<u>Operat- ing Ratios</u>	<u>Minority Interest</u>	<u>Common & Surplus</u>
25. Pacific Lighting	83	53.13		17
26. Penn. Water & Power	60	34.3		40
27. Public Service of N.J.	58	62.9	12	30
28. So. California Edison	77	33.6		22
29. Standard Gas & Electric		56.5		16
30. United Gas Improvement	51	53	6	43
31. United Light and Power	80	56.77	9	11
32. Utilities Power Light	73	53.63	2	25
33. American Commonwealth Power Company	80	59.13	11	9
34. Edison Co. of Boston	37	55.75		63
35. National Pub. Service Co.	71	63.95	18	11
36. N.E. Public Service Co.		56.8		
37. North Boston Lighting	55	64.7		45
38. Public Service of No. Illinois	63	60.4		37
39. Northern States Power	79	49.53		21
40. Rock Light & Power	33	54.9		67
41. Shawhigan Water	45			55
42. Western Mass. Companies	24	55.83		76
43. Bangor Hydro Elec. Co.	56	45.63		44
44. Central Hudson Gas & Elec.	70	59.5		30
45. Conn. Power Company		60.98		
46. Hartford Electric		57.63		100
46. Montreal Light and Power	89			71
47. Tampa Electric	14	57.75		86

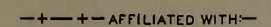
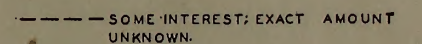
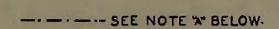
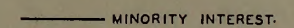
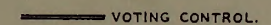
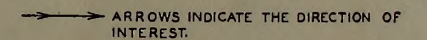
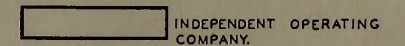
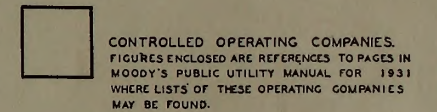
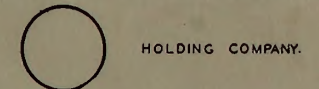
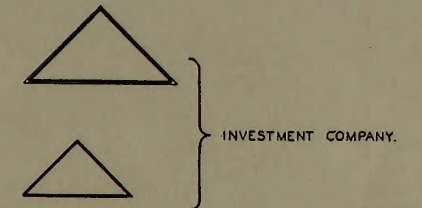
In the above table columns I and IV are to be considered together, as the percentages for each company appearing in these columns, when added together equal 100 %.

MOODY'S CHART OF PUBLIC UTILITY INTERCORPORATE OWNERSHIP

Indicating Percentage of Voting Interest



KEY TO SYMBOLS



*PREFERRED STOCK HAS VOTING POWER. (% SHOWN IS % OF TOTAL VOTING STOCK)

%PERCENT OF VOTING INTEREST. ALL DATES AS OF 12/31/30 UNLESS OTHERWISE SHOWN.

V.T.C. VOTING TRUST CERTIFICATES.

A H M BYLLESBY OWNS THE MAJORITY OF THE CLASS "B" STOCK OF STANDARD POWER & LIGHT CORP. WHICH PERMITS IT TO ELECT A MINORITY OF THE BOARD OF DIRECTORS OF STANDARD POWER & LIGHT CORP. AND THE LATTER TO ELECT A MAJORITY OF DIRECTORS OF STANDARD GAS & ELECTRIC CO.

B HOLDINGS OF PUBLIC UTILITY HOLDING CORP AS OF 5/31/31 SHOWN AS PER CENT OF NUMBER OF SHARES OUTSTANDING, 12/31/30.

C APPROXIMATE.

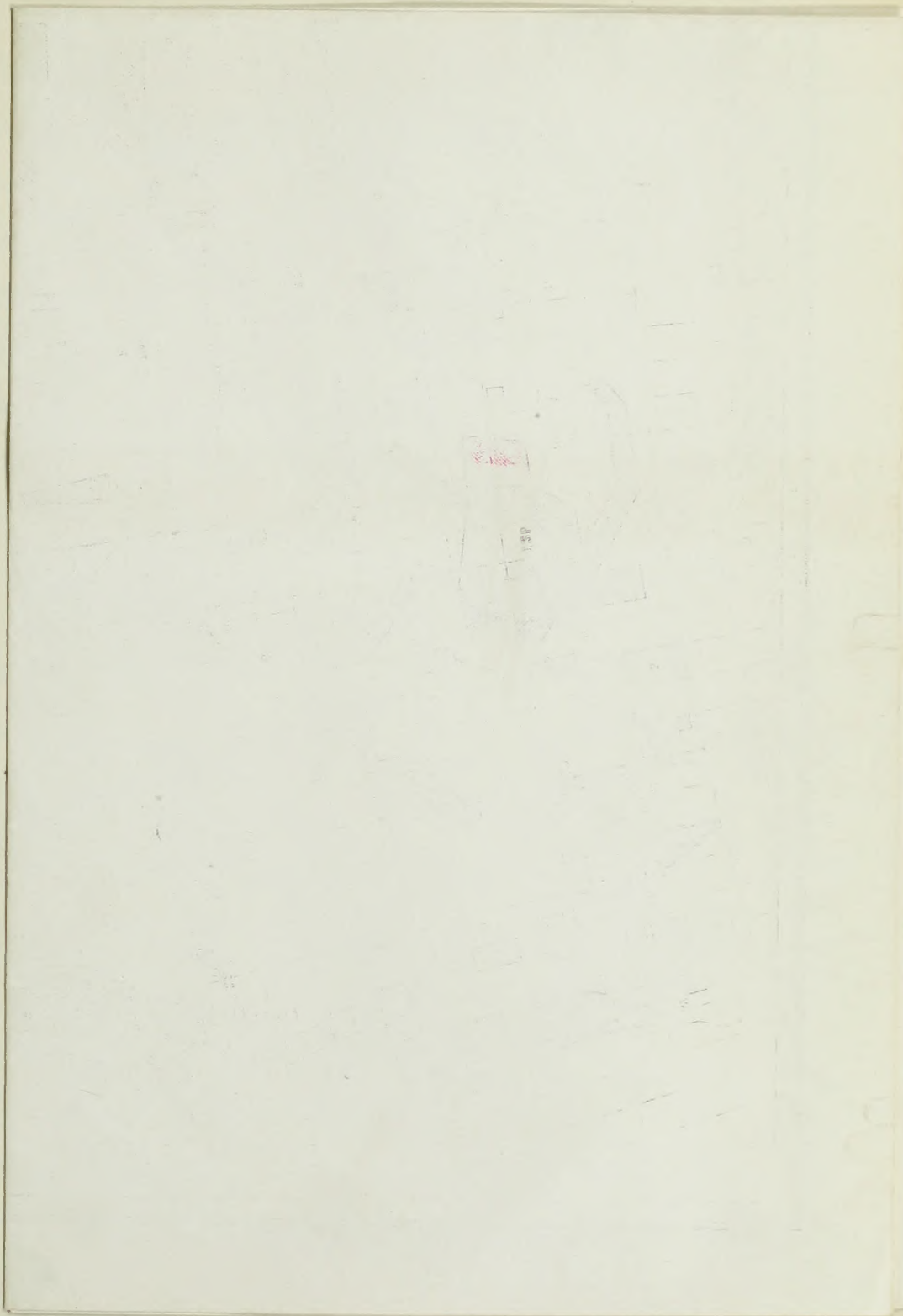
THE UNIVERSITY OF CHICAGO

THE DIVISION OF THE PHYSICAL SCIENCES

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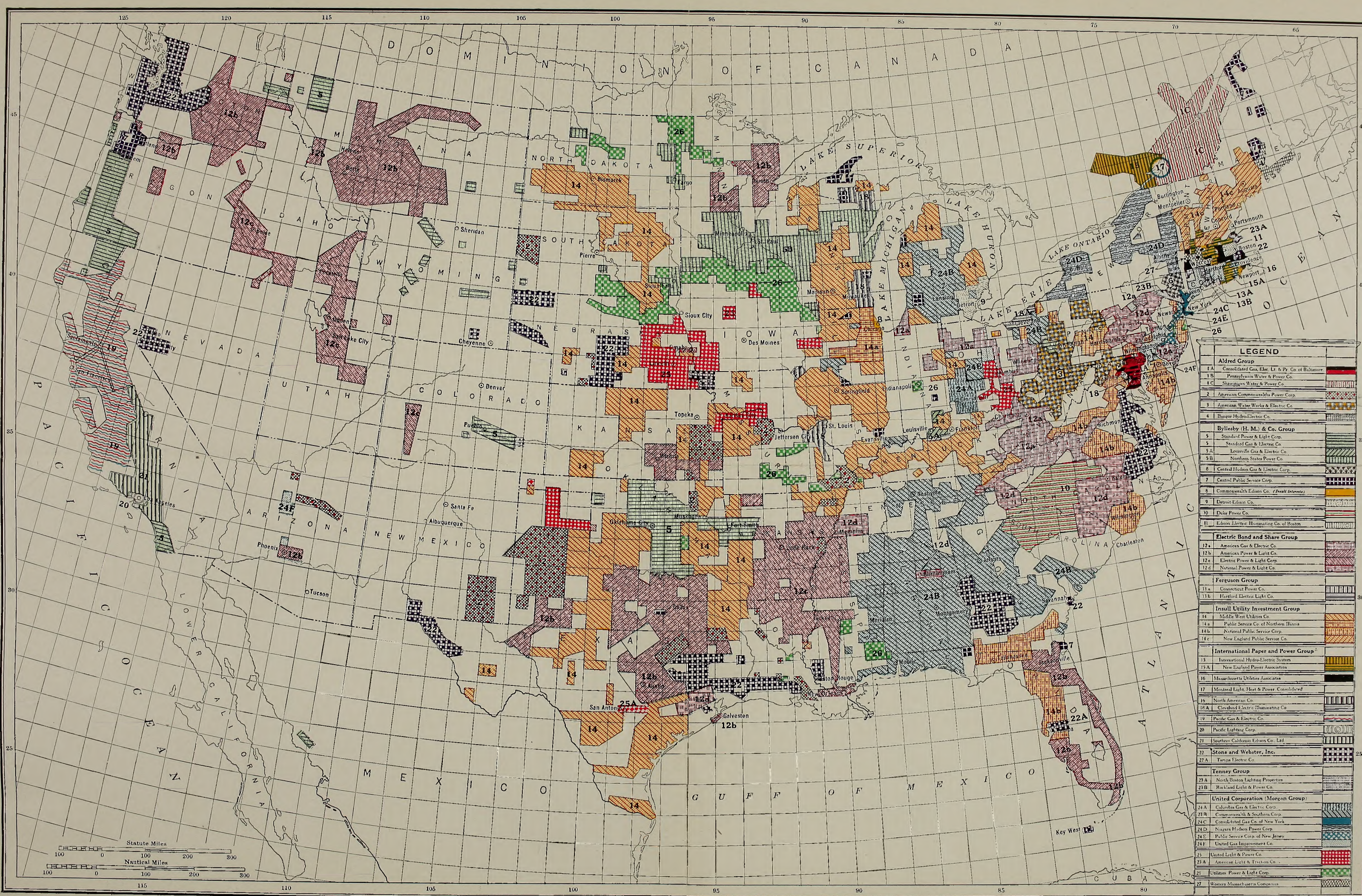
MAP

Sixty operating companies in the United States.



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LEGEND	
Aldred Group	
1A	Consolidated Gas, Elec. Lt. & Pw. Co. of Baltimore
1B	Pennsylvania Water & Power Co.
1C	Shamokin Water & Power Co.
2	American Commonwealth Power Corp.
3	American Water Works & Electric Co.
4	Danvers Hydro-Electric Co.
Byllesby (H. M.) & Co. Group	
5	Standard Power & Light Corp.
5A	Standard Gas & Electric Co.
5B	Louisville Gas & Electric Co.
5C	Northern States Power Co.
6	Central Hudson Gas & Electric Corp.
7	Central Public Service Corp.
8	Commonwealth Edison Co. (Trust Interests)
9	Detroit Edison Co.
10	Duke Power Co.
11	Edison Electric Illuminating Co. of Boston
Electric Bond and Share Group	
12A	American Gas & Electric Co.
12B	American Power & Light Co.
12C	Electric Power & Light Corp.
12D	National Power & Light Co.
Ferguson Group	
13A	Connecticut Power Co.
13B	Hartford Electric Light Co.
Insull Utility Investment Group	
14	Middle West Utilities Co.
14A	Public Service Co. of Northern Illinois
14B	National Public Service Corp.
14C	New England Public Service Co.
International Paper and Power Group	
15	International Hydro-Electric System
15A	New England Power Association
16	Massachusetts Utilities Association
17	Montreal Light, Heat & Power, Consolidated
18	North American Co.
18A	Cleveland Electric Illuminating Co.
19	Pacific Gas & Electric Co.
20	Pacific Lighting Corp.
21	Southern California Edison Co., Ltd.
22	Stone and Webster, Inc.
22A	Tampa Electric Co.
Tenney Group	
23A	North Boston Lighting Properties
23B	Rockland Light & Power Co.
United Corporation (Morgan Group)	
24A	Columbia Gas & Electric Corp.
24B	Commonwealth & Southern Corp.
24C	Consolidated Gas Co. of New York
24D	Niagara Hudson Power Corp.
24E	Public Service Corp. of New Jersey
24F	United Gas Improvement Co.
25	United Light & Power Co.
25A	American Light & Traction Co.
26	Utilities Power & Light Corp.
27	Western Massachusetts Companies

MAP SHOWING APPROXIMATE FIELD OF OPERATION OF THE ELECTRIC PROPERTIES CONTROLLED BY THE 60 UTILITY ORGANIZATIONS WHOSE SHARES ARE INCLUDED IN THE PORTFOLIO OF

PART VI
SUMMARY

I have traced the growth of the holding company from the very beginning of the industry. The earliest holding companies were found by manufacturers of electrical equipment who sought to find a market for securities of operating companies that they had accepted as payment for equipment, or in many cases, who sought to build up large systems under their control which would be large purchasers of their equipment. Later the management and engineering type of holding Company entered the field and finally the investment or financial type joined the group.

I indicated that although there were certain questionable practices such as issuing bonus stock that were in evidence during this period, the disadvantages were outweighed by the advantages accruing to the general public, by virtue of the rapid expansion of electrical facilities. Regulation of holding companies in this early period might have greatly retarded the growth of the industry.

These holding companies secured funds for the operating companies at much lower rates than the latter would have been able to obtain, if they had been forced to bargain individually. The electric light and power industry was in its infancy, it was untried and view by the investment market as speculative unless backed by reorganized firms of high credit standing. Small, local units were not well known in financial circles and as they used up their local credit facilities they were hard pressed to secure the funds needed for expansion. This was, and is, a social and national

problem for it concerns an industry "affected with a public interest."

In addition to the support which these holding companies give to their subsidiaries in the matter of financing, they also proved beneficial in several other ways. As distribution facilities were perfected it became practical to build larger central stations capable of serving fairly wide areas. Gradually adjoining systems were physically intergraded, as the distribution lines of central stations were spread out over increasing distances. Actual operating economies were realized. The unit cost of generating electively was reduced by the interconnections, and duplications of equipment were eliminated. One of the greatest savings made possible by such consolidations is the reduction in total reserve capacity required i.e. A central station supplying a wide area need not have a reserve capacity, equivalent to the total reserve capacity of the individual units formerly supplying the same district.

We also have proof that overhead expenses do not increase in direct proportion to the expansion of business. This means that the total overhead expenses of an efficient central plant are less than the similiar combined expenses of the group of local units that previously supplied the same territory. After such consolidations the unit cost should therefore drop. When we realize that in many cases, these overhead charges account for over fifty percent of the total costs, we can understand how large savings are possible. These large stations can maintain a balanced load factor because of their customer diversification, so that they

operate nearer to capacity than do the single units serving local communities. Of course the unit costs of plants decrease as they approach their production capacities, due to the workings of the law of "decreasing costs".

The holding companies are able to furnish the services of specialists in management and construction activities, to their subsidiaries which are of a higher grade than the operating companies could afford if they acted independently. Finally the parent company can, by purchasing materials in large quantities, secure these necessary supplies, for the operating companies at lower costs than they would be able to buy them separately.

The holding companies did a good piece of work during the early era of expansion, and the majority of these older companies have continued to contribute to the efficient growth of the industry. Faults, of course, were present in these early days, but on the whole, the benefits to the nation far outweighed the detriments. The holding companies pushed expansion through the War period against many odds. Prices of material and wages had risen while rates declined. Many of the separate operating companies came into difficulties with commissions; others were poorly managed and not adequately financed - All these things had their repercussions on the holding companies and were obstacles which they overcome by persistent effort. Great strides were made in the efficiency of operation. They succeeded in raising the status of public securities, to a high rank, making it possible for the industry to secure adequate funds at reasonable rates.

During the War we had signs of a new era of holding company

development which became increasingly evident soon after the War and which became the dominant factor in the power and light industry during the last decade. This was the growth of holding companies made up of units, usually widely separated. In my opinion there were several main reasons for this new trend, but I would not place the possible benefits to the public among these major causes. It is true that the "resulting efficiencies" of such combinations were widely heralded by their promoters. However, only a casual perusal of their arguments show that they are the same as those used by the preponents of the older type of utility holding company. A little scrutiny shows one that efficiency made possible by physically intergrating separate units does not have a parallel when units that are widely separated geographically are united under central control.

I feel that the true reasons for this trend have been:

a) The desire on the part of investment bankers and utility promoters to derive higher profits from the flotation of security issues; i.e. the profit incident to these merger.

b) The desire on the part of certain utility management or investment companies to secure control of utility companies in order to clamp down upon them, all types of contracts which are highly lucrative to the parent company. I refer here, of course, to service management and construction fees which are charged to the subsidiaries and which have only a slight relation to the actual costs of the services to the parent company.

c) The desire ^{of} certain leaders to wield tremendous power. They have Napoleonic complexes and the control of vast properties

and millions of other peoples money, serves as an outlet to their natures. I refer here to such men as Samuel Insull.

That some of the mergers during the last ten years have been justified on sound economic grounds is of course true. The better type of managements developed systems of closely related companies which they united and which resulted in real economies of operation. However, we saw the multitude of mergers that took place during the years from 1924 to 1929. The profits realized by the promoters because of their connection with these consolidations would seem to have been more important to them, than any desire to affect real savings which could be passed on to consumers.

Diversification of investment and in geographical distribution results in a certain amount of safety being created due to the working of the insurance principle of diversified risk, with which we are all familiar. However, other factors entering into the consolidations may greatly alter these and other possible beneficial results. For example, the scramble to secure operating companies by many of the newer holding companies, caused the latter to bid in competition for them with the result that the one who did finally purchase the property, usually paid an exorbitant price for it. How is the investor who supplied the funds, to the managers of the holding company, with which these units were purchased, ever to realize a fair return on such ill advised investments? Certainly if regulation of the operating companies is adequate they will never earn enough to pay a fair return on this inflated valuation.

Furthermore some of the consolidations of late years which resulted in the physical intergation of plants have not always proved

desirable. There is an optimum of size for an operating company beyond which it is uneconomical to expend. There is a definite limit as to the distance which it is economically feasible, except in cases of emergency, to transmit power. As the cost of generating power accounts for only about 12 per cent of the total costs while distribution costs make up the bulk of the remainder, it is easily seen that savings in generation costs can only reduce total costs slightly and that they may be offset by only relatively slight increase in the distribution costs. Holding company expansion based on interconnections beyond this point have undoubtedly taken place during the recent era of rapid growth.

I think that at the present time we are securing adequate proof that the economic value of many of these later holding companies is a myth. If these companies are justifiable they must prove that they serve an economic purpose in the public utility field. They must first and last, be an aid, a pillar of strength to their subsidiaries. The facts show us that they have fallen far short of this purpose. Of course they all went along merrily until the crash of the security market in 1929. All they had to do was float along with the current.

What has happened since 1929? We have seen many of our largest utility holding companies in grave difficulties since that time. The Middle West Utilities Company, a billion and a half dollar corporation. The Tri-Utilities Company and the W. B. Forshay Group have all passed onto the hands of receivers, and many of the other large systems are shivering on the brink of bankruptcy. One would naturally think that

the electric light and power industry must have been very badly affected by the depression if these huge holding companies, built up to aid and advance the "industry, have been forced by its " very poor showing" to topple over or totter on the edge of this breach.

I will present just a few facts that prove without a doubt that these holding companies have fallen from their own over-weight. Their policies have eaten into their very vitals and as the core of life, which supported what in reality was never more than a mere skeleton, was dissipated, the frame collapsed. They were spider like structures spread over the country with little solidity or strength in their connecting links.

The utility operating companies in the United States, showed an average drop in sales of only 3.75 per cent for the year 1931 as compared with the year 1930. Their drop in net revenues was even less, being .65 per cent for the same period.* This remarkable showing was accounted for largely by the fact that although industrial sales fell off considerably, domestic sales increased and although the increase in kilowatts hour sold to domestic consumers did not equal the drop of the former sales, the revenue loss was negligible. This is due to the fact that a kilowatt hour sold to a domestic consumer brings a much larger return than a kilowatt hour sold to industry. Now a drop of .65 per cent in the net revenue is not going to seriously effect an industry. In fact, to all intents and purposes, such a drop is negligible. The revenues of operating companies may be said to have remained on the average intact.

With this point in mind I will again revert to the holding company situation. Just as a reminder; the Middle West Utilities

*"Electrical World" January 2, 1932 Annual Statistical Number

has this week gave into the hands of receivers and I have before me the consolidated statement of the United Light and Power Company which shows a net of \$4,219,382.02 in 1931 against a net of \$6,893,837.26 in 1930 or approximately a drop of 40 per cent.

These examples of the present situation should be illuminating. We know that these companies all represent pyramiding, or as Dewing says, "the capitalization of controlling stock interests". Therefore we know that a slight shrinkage in the revenues of operating subsidiaries will cause a larger decrease in the revenues of the holding company. Profits and losses are both magnified by pyramiding. However, the negligible drop of the operating companies on the average will not account for such tremendous drops as we have noted as occurring on the revenue of the holding company.

We must go at least a little deeper into the complex. For those who don't wish to search too diligently, the annual report of the Electric Bond and Share Company furnishes a tangible solution. The directors of the company boldly state, although 98 per cent of the company's assets consist of investments in subsidiaries, that their present financial difficulties are due to the drop in revenues usually secured from their contracts with their subsidiaries.

If we look at the records of the industry for a moment we find that the utilities spent 34 per cent less on expansion in 1931 than they did in 1930. The industry raised \$1,491,000 by capital issues in 1931. Of this amount only 36 per cent was used for new construction and 64 per cent was used for refunding purposes. Naturally these holding companies could not make enormous profits from engineering and construction contracts if these subsidiaries took little or no services at all. And to complete the vicious circle of deflation, as the credit of the holding companies became impaired due to the formentioned sharp drop in income, they were unable to float security issues for their subsidiaries and they thereby lost their other large means of revenue.

We find the American and Foreign Power Company with banks loans already a year old which have just been extended until Oct. 26, 1933 by bankers seeking to keep the company out of bankruptcy, for it is unable to float a bond issue at the present time even though strong operating utilities can secure funds at a cost of five per cent. Companies that were successful in floating securities at reasonable rates during 1931 were operating or holding operating corporations. Where is the strength that the holding companies were to furnish these subsidiaries during times of depression? About all that many of these holding companies are doing is proving to be a millstone around the necks of their subsidiaries.

To my way of thinking this newer type of holding company has already received quick punishment for the unethical practices

of its directors and management. We cannot, however, dismiss the problem so summarily. How glibly the great utility magnates can speak and how much faith is put in their statements is demonstrated by the following incident. During the week of April 14, 1923 the Middle West Utilities Company passed into the hands of receivers. At that time, Samuel Insull, the high potentate of the holding company, stated that such proceedings would have no effect on the subsidiaries of the company. Immediately the stocks of Commonwealth Edison, Peoples Gas Light and Coke Company and Public Service Company of Northern Illinois rose about twelve points. What a magic position the subsidiary of these holding companies occupy! According to Mr. Insull, they share handsomely in the benefits of the holding company when it is successful but they suffer not at all if their parent company goes into bankruptcy. Does not this seem like an Utopian form of association? At a time when the interdependence of all economic units is being so ably indicated it is difficult for me to see how these subsidiaries, which are so closely associated with these holding companies, can avoid the repercussion to their credit that will naturally result from the insolvency of their parents.

As a matter of fact I think that we have ample proof that not only in this matter but also in many others, the practices of the holding company are undeniably intertwined with the operations of their subsidiaries. In the first place excess financing and service fees charged by the holding companies become the operating expenses of the subsidiary and must be paid for by the public. Legally the commissions, while

they can refuse to consider such excess fees in the rate base, cannot refuse to allow the company to pay these charges. Secondly, when the holding companies find themselves in financial difficulty, they must pay high rates for the money that they secure for their operating companies. These subsidiaries will need money regularly and the cost of capital is an important item both from their standpoint and from that of the ratepayer. Both the operating company and the public need protection which can only be secured by adequate regulation.

Furthermore, the stockholders of the subsidiary and holding companies have been duped in many instances. The separation of management from ownership is one of the greatest problems which we have to face in this country. The practices of the management who frequently have little to lose, while not usually not absolutely illegal have certainly been divorced from any code of ethics with which I am familiar. The slight responsibility of directors for their acts is deplored by William Z. Ripley in his attacks on corporation law. A British Lord has recently been imprisoned because he had issued, falsified statements to stockholders. We have many directors of public utility holding companies that would not be out of place in adjacent cells. Not only the wide diversification of the stock of these corporations in general, but the practice of selling securities to customers, who are not regular and experienced investors, makes it imperative that the real owners of these companies receive some sort of protection from self seeking managements. When, as in the case of Electric Bond and Share, certain of the directors can purchase unknown to the stockholders, the stock of the company at \$40. and offer more of it to the old stockholders a few weeks later at \$80. something would seem to need correction. When however we find that the directors by subterfuge succeeded in having the company buy back all the stock they had purchased when it fell below \$40 we are sure that the investor needs protection immediately from such unscrupulous directors.

Some of the holding companies have been dissolved, others will follow and the remainder will survive the depression some of them much the worse for wear. It is with the ones that remain that we must deal. We must have regulation of holding companies. It must be Federal regulation, for that is the only type that can deal

adequately with such large interstate corporations just as we needed such a body as the Interstate Commerce Commission to regulate the interstate railroads. The holding corporations should be incorporated by the Federal Government, thereby receiving their charter and right to existence from it and subject to its jurisdiction.

Regulation must instigate the use of uniform accounting. It must provide for periodic inspection of the books of the holding companies. It must definitely separate the non utility portions of the holding and investment companies from the strictly utility sections. If I may be permitted to use the term, 'mongrels' must be eliminated. It is not wise to allow a corporation to masquerade as a utility when a large part of its revenue may be derived from such a highly speculative business as the oil industry.

Holding corporations should be compelled to issue regular, standardized consolidated statements of operations, all intercompany eliminations that are demanded by good accounting, having been made. Rates should, in my opinion be based on the prudent investment valuation, wherever this can be adequately ascertained. Rates should be more scientifically adjusted to the cost of service. The Federal Commission given the power of regulating these corporations should also have the authority to instigate investigation proceedings in its own solution.

In closing I wish to remind the reader that I have not condemned all holding companies. I have shown that many of the older type are economically justified and have proved their worth admirably. However the newer type which has been the result of merging widely scattered properties and of piling one holding company on another almost ad infinitum, has not proven to be very satisfactory from either the investor's or the consumers standpoint.

Many disadvantages have sprung up under this system of holding company control that need to be remedied. Ten large holding companies control over seventy-five per cent of the electricity that is produced in the United States those are large interstate corporations that are practically without any form of regulation.

We need Federal regulation of all holding companies and it would seem that with the truth being presented so forcibly as it now is, we will have some definite move toward Federal regulation in the near future. Senator Couzens has presented a bill to the United States Senate that seems to offer a feasible solution to this problem.*

* "Public Utility Fortnightly" Vol. 6 Aug. 7, P.131 - A discussion of this Bill.

Part VII

Bibliography

A. A list of Books Which Were Read Completely.

1. "Guiding Principles of Public Service Regulation"
(Public Utility Reports Inc.) by Henry C. Spurr
2. "Public Utility Regulation" by Morris L. Cooke (Rowell Press)
3. "The Economics of Public Utilities" by L. R. Nash.
(McGraw Hill Book Co.)
4. "Problems in Public Utility Management" by P. Cabot and
(McGraw Hill Book Company) D. W. Milott.
5. "Depreciation of Public Utility Properties" by H. E. Riggs.
(McGraw Hill Book Company)
6. "The Public and Its Utilities" by William G. Raymond.
(John Wiley and Sons Inc.)
7. "Rate Making for Public Utilities" by Lamar Lyndon.
(McGraw Hill Book Company)
8. "Electrical Utilities" by William E. Mosher and Associ-
(Harper and Brothers) ates.
9. "Materials for the Study of Public Utility Economics" (The
(The MacMillan Company) MacMillan Co.)

B. A List of Books Which Were Used for Investment and Financial Principles.

1. "Investment Principles and Practices" by R. E. Badger
(Prentice Hall Publishers)
2. "Financial Organization and Management" by Charles Gersten-
(Prentice Hall Publishers) berg.

C. Sources of Statistical Information in Addition to the Above.

1. "Moody's Manual of Public Utilities 1931."
2. "The Bonbright Survey of the Electric Light and Power
(McGraw Hill Book Company) Industry 1931"
3. "The Electric Light and Power Industry - Statistical
(National Electric Light Assoc.) Bulletin Number 7"
4. "The Electrical World - Supplement" to the May 2, 1931 Issue
(McGraw Hill Publishing Company)

Appendix

1. List of Books and Papers

1. "The Principles of Public Health" by W. H. L. Ross (1911)
2. "The Principles of Public Health" by W. H. L. Ross (1911)
3. "The Principles of Public Health" by W. H. L. Ross (1911)
4. "The Principles of Public Health" by W. H. L. Ross (1911)
5. "The Principles of Public Health" by W. H. L. Ross (1911)
6. "The Principles of Public Health" by W. H. L. Ross (1911)
7. "The Principles of Public Health" by W. H. L. Ross (1911)
8. "The Principles of Public Health" by W. H. L. Ross (1911)
9. "The Principles of Public Health" by W. H. L. Ross (1911)
10. "The Principles of Public Health" by W. H. L. Ross (1911)
11. "The Principles of Public Health" by W. H. L. Ross (1911)
12. "The Principles of Public Health" by W. H. L. Ross (1911)
13. "The Principles of Public Health" by W. H. L. Ross (1911)
14. "The Principles of Public Health" by W. H. L. Ross (1911)
15. "The Principles of Public Health" by W. H. L. Ross (1911)
16. "The Principles of Public Health" by W. H. L. Ross (1911)
17. "The Principles of Public Health" by W. H. L. Ross (1911)
18. "The Principles of Public Health" by W. H. L. Ross (1911)
19. "The Principles of Public Health" by W. H. L. Ross (1911)
20. "The Principles of Public Health" by W. H. L. Ross (1911)

5. "The Electric Light and Power Industry - Basis Statistical
(National Electric Light Assoc.) Data" Aug. 1931
 6. "Survey of Current Business" - Annual Supplement 1931
(United States Department of Commerce)
 7. "Recent Economic Changes" - President Hoover's Committee on
Unemployment.
- D. "General Bulletins and Articles on Holding Managing and
Investment Co's.
1. "Holding and Management Companies" by H. Erickson - an address
(National Electric Light Association) 1928.
 2. "A Primer on the Electric Light and Power Industry."
(National Electric Light Association 1931)
 3. "The Growth of Public Utility Holding Companies" - L. C. Parsons
(Alexander Hamilton Institute - Modern Bus. Exp. 1916)
 4. "Mr. G. N. Todd - Before Federal Trade Commission."
(National Electric Light Association 1930)
 5. "Importance of Holding Company in the Developement of Super-
(Boston Evening Transcript June 3, 1926) power"
 6. "Public Utility Points" - Eleventh Edition 1931
(Bonbright and Company)
 7. "Electric Service in the American Home."
(National Electric Light Association 1931)
 8. "A Broader Realization of the Holding Companies Efforts to
(National Electric Light Assoc. 1930) Serve" by M. A.
Morrison.
 9. "Modern Electric Service in the American Home" by E. Greenwood.
(National Electric Light Association 1931)
 10. "The Investment Company in Business Development" by J. T.
(National Electric Light Assoc. 1928) Madden.
 11. "Consolidations in the Electrical Utility Industry"
(National Electric Light Assoc.) by M. S. Sloan
 12. "A Study of Power and Light Investment."
(Bonbright and Company)

E. Books - and Articles on Regulation.

1. "Regulation of Public Utilities" by Clay
2. "The Public and Power" by Martin J. Insull.
National Public Service Corporation.
3. "Public Utility Regulation and Its Accomplishments" by W. J.
National Electric Light Assoc. June 1929 Hagenah
4. "The Power Monopoly-Its Make Up and Its Menace" by G. Pinchot
Gifford Pinchot - Milford, Pa. 1929.
5. "Brakes on Prosperity" by C. E. Grosbeck
National Electric Light Association 1931
6. "High Power Propaganda" by H. S. Raushenbush
"New Republic Inc." 1928
7. "Holding Companies and Relation to Regulation" by Martin
National Electric Light Assoc. June 1930. Insull.
8. "Private or Government Ownership" by A. H. Markwait.
National Electric Light Association 1929.
9. "Politics and the Power Issue"
"Nation" - Dec. 17, 1930
10. "Three Hundred Millions of New Issues Measure Insulls 1930
"Business Week" - P.26-8 Sept. 24, 1930 & "Growth"
11. "How to Control Public Utilities" by C. H. Marx
"Nation" - P. 348-350 April 1, 1931
12. "Ownership of Public Utilities" - Public vs. Private
"Current History" Aug. 1930 by F. L. Carlisle
13. "News From the Power Front."
"New Republic" Jan. 15, 1930 Page 209-10.
14. "Amalgamation of Gas and Electric Co's. East of the
"New Republic" May 28, 1930 P. 29 Mississippi."
15. "Is there a Power Trust?"
"Nation" March 6, 1929, P. 281-3
16. "Superpower - A Solution For It."
"Forum" (83) April 1930 P. 247-51
17. "Goliath and His Davids."
"American Mercury," July 1929 P. 290-7
18. Address before the Academy of Social and Political
Science, Nov. 6, 1931, by John Flynn.
19. "Dartmouth College Case" by Chief Justice Marshall.
-211-

1. The first section of the report is devoted to a general survey of the situation in the country.

2. The second section contains a detailed account of the work done during the year.

3. The third section is devoted to a discussion of the results of the work done during the year.

4. The fourth section contains a list of the names of the persons who have taken part in the work.

5. The fifth section is devoted to a discussion of the financial position of the institution.

6. The sixth section contains a list of the names of the persons who have been elected to the office of the President.

7. The seventh section is devoted to a discussion of the work done during the year.

8. The eighth section contains a list of the names of the persons who have taken part in the work.

9. The ninth section is devoted to a discussion of the results of the work done during the year.

10. The tenth section contains a list of the names of the persons who have been elected to the office of the President.

11. The eleventh section is devoted to a discussion of the financial position of the institution.

12. The twelfth section contains a list of the names of the persons who have taken part in the work.

13. The thirteenth section is devoted to a discussion of the results of the work done during the year.

14. The fourteenth section contains a list of the names of the persons who have been elected to the office of the President.

15. The fifteenth section is devoted to a discussion of the financial position of the institution.

16. The sixteenth section contains a list of the names of the persons who have taken part in the work.

17. The seventeenth section is devoted to a discussion of the results of the work done during the year.

18. The eighteenth section contains a list of the names of the persons who have been elected to the office of the President.

19. The nineteenth section is devoted to a discussion of the financial position of the institution.

20. The twentieth section contains a list of the names of the persons who have taken part in the work.

18. "Public Utility Investments and Speculation."
"Worlds Work" October 1929, P. 24-8
19. "The Power Trust, The Politician and the Plunderbust."
"Public Utility Fortnightly" Oct. 29, 1931
20. "Fallacies" by Raymond Willoughby
"Nations Business" October 1931
21. Article by E. O. Mallott
"Journal of Land and Public Utility Economies" IV, 1928
P. 147-50.
- 22 Article by Evans Clark - On the Relative Importance of the
Electric Light and Power Industry.
New York Times March 25, 1928.

F. Sources of General Information.

1. "The Holding Company" by Bonbright and Means
April 1923.
2. "Utility Corporations" - Letters from the Chairman of the
of the Federal Trade Commission - Transmitting Reports and Ex-
hibits In Response to Senate Resolutions numbers 83 and 112. -
Letters and Exhibits No. 1 to 32.

Due to the kindness of United States Senator George H. Tinkham ,
I have received the complete reports of the Senate investigation
to date. They consist of about thirty voluminous records. I have
gone through these and I have tried to take
from them typical examples to illustrate important points in my
thesis. In addition to the actual examples so quoted it is im-
possible to estimate the immense value that these reports have
been to me in supplying me with current and pertinent information
concerning the utility industry.

3. "The Morals of the Power Trust
The New Republic April 14, 1932.

12. "Public Utility Investments and Speculations"
Article No. 1, Vol. 1, 1934

13. "The Power Trust, The Public Utility and the Government"
"Public Utility Investments" Vol. 1, 1934

14. "Public Utility Investments"
Article No. 1, Vol. 1, 1934

15. "Public Utility Investments"
Article No. 1, Vol. 1, 1934

16. "Public Utility Investments"
Article No. 1, Vol. 1, 1934

17. "Public Utility Investments"

18. "Public Utility Investments"
Article No. 1, Vol. 1, 1934

19. "Public Utility Investments"

20. "Public Utility Investments"

21. "Public Utility Investments"

22. "Public Utility Investments"

23. "Public Utility Investments"

24. "Public Utility Investments"

25. "Public Utility Investments"

26. "Public Utility Investments"

27. "Public Utility Investments"

28. "Public Utility Investments"

29. "Public Utility Investments"

30. "Public Utility Investments"

31. "Public Utility Investments"

32. "Public Utility Investments"

The Public Utility Investments

4. "Public Regulation of Holding Companies in the Public Utility Field" by Phillip P. Wells.
Proceedings of the Academy of Political Science XI (1924-26)
5. "Main Street and Wall Street" by William Z. Ripley.
6. "Causes of the Migration of Industry."
Metropolitan Life Insurance Co. 1928
7. Excerpts from Gr. Ec.-4 Lectures by Professor Sutcliffe
Boston University 1931-32
8. "Intercompany Relations" by Noyes
9. "Security Racketeering" by Harry Van Horn
National Electric Light Association - Monthly Bulletin
Aug. 1931
10. "The Interrelation of the Utilities" by Harry T. Rohs.
Boston News Bureau Feb. 7, 1931, Page 8.
11. Finney "Principles of Accounting" Volume II
Chapters on Intercompany Relations.
12. "Public Utility Reports" 1925-1931
Public Utility Reports Inc.

Addenda:

1. "Sick in Bed With Common Stocks", by Mc Neil.
2. "Railroad Finance and Organization", by W.Z. Ripley
3. "Other People's Money" by Chief Justice Brandeis.
4. "Statement by Samuel Ferguson of the Association of Edison Illuminating Companies, in 1926 (overcapitalization)
5. "Charter" of the Electric Bond and Share Company as given in "Utility Corporations" Exhibit No. 4587.
6. "Annual Report" Middle West Utilities.
7. "Boston Herald" Feb. 28, 1932.
8. "Smyth vs. Ames" as it appears in "Problems in Public Utility Management" page 69, by Cabot and Malott.
9. "Private Property and the Corporate System" by Adolph Beale.
10. "Re Southwestern Bell Tel. Co., 262 U.S. 276.
11. "New York Times" April 10, 1932. Article by W.Z. Ripley
12. "Electrical World" Jan. 2, 1932, Annual Statistical Number

1. "Public Relations of the American Chemical Society" (1925-26)
Public Relations of the American Chemical Society (1925-26)

2. "Public Relations of the American Chemical Society" (1925-26)

3. "Public Relations of the American Chemical Society" (1925-26)

4. "Public Relations of the American Chemical Society" (1925-26)

5. "Public Relations of the American Chemical Society" (1925-26)

6. "Public Relations of the American Chemical Society" (1925-26)

7. "Public Relations of the American Chemical Society" (1925-26)

8. "Public Relations of the American Chemical Society" (1925-26)

9. "Public Relations of the American Chemical Society" (1925-26)

10. "Public Relations of the American Chemical Society" (1925-26)

11. "Public Relations of the American Chemical Society" (1925-26)

12. "Public Relations of the American Chemical Society" (1925-26)

13. "Public Relations of the American Chemical Society" (1925-26)

14. "Public Relations of the American Chemical Society" (1925-26)

15. "Public Relations of the American Chemical Society" (1925-26)

16. "Public Relations of the American Chemical Society" (1925-26)

17. "Public Relations of the American Chemical Society" (1925-26)

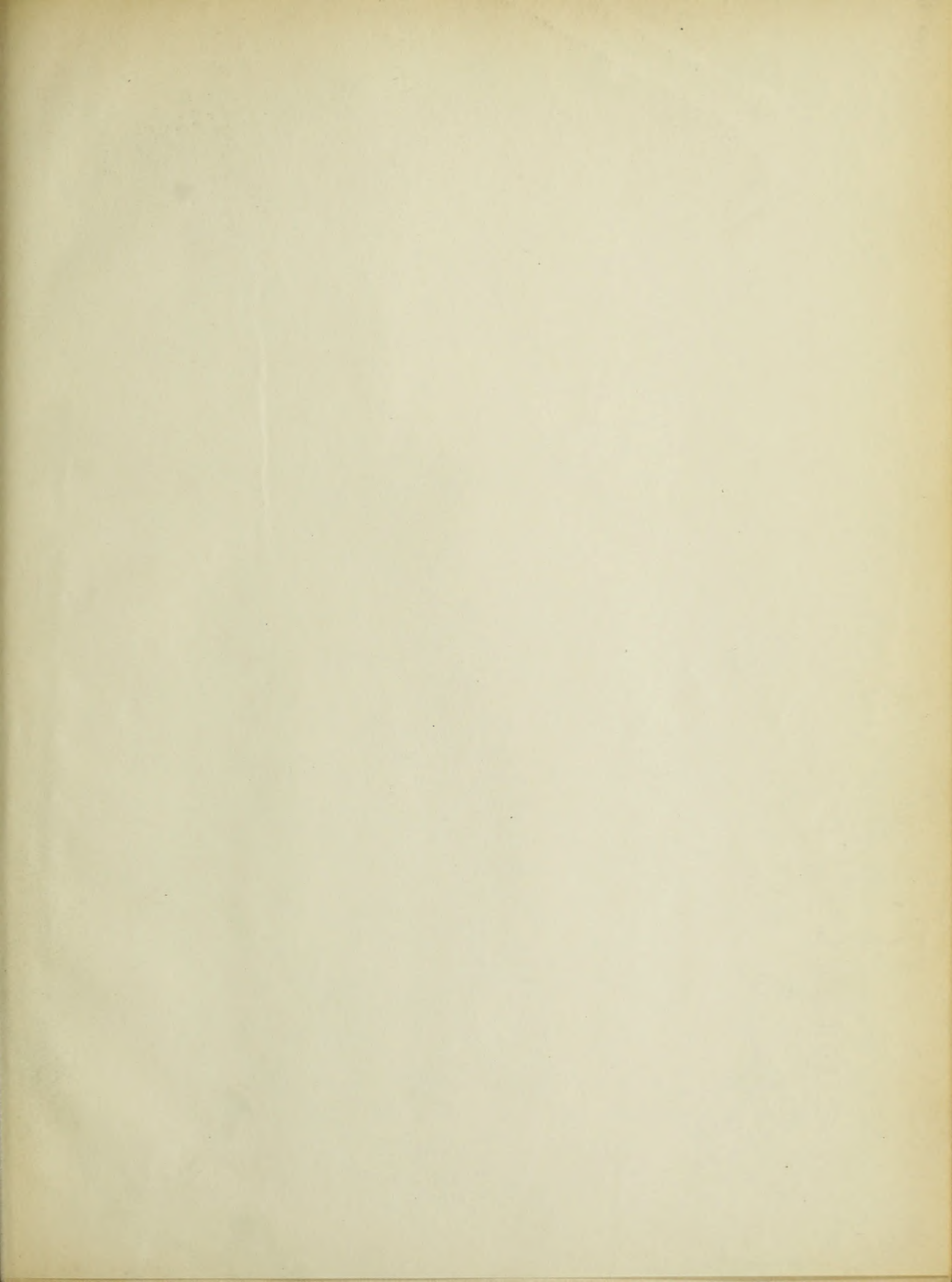
18. "Public Relations of the American Chemical Society" (1925-26)

19. "Public Relations of the American Chemical Society" (1925-26)

20. "Public Relations of the American Chemical Society" (1925-26)

21. "Public Relations of the American Chemical Society" (1925-26)

22. "Public Relations of the American Chemical Society" (1925-26)



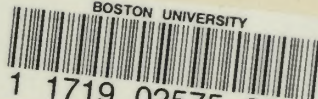
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